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JANUARY 1953

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C.M.A. ANNUAL MEETING, MAY 24-28, 1953, LOS ANGELES

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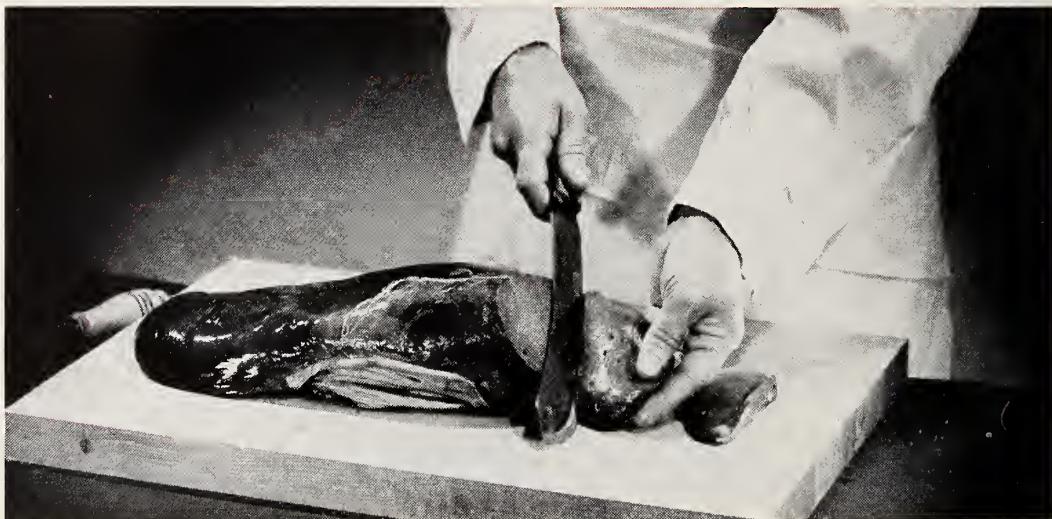
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1. Spies, T.: International Conference on Vitamins and Hormones, Havana, Cuba, 1952.
2. Chow, B.F.: Southern Med. J., 45:604, 1952.
3. Conley, C.L., Green, T.W., Hartman, R.C. and Krevans, J.R.: Am. J. Med., 13:284, 1952.
4. Campbell, R.R., and Pruitt, F.W.: Am. J. Med. Sci., 224:252, 1952.

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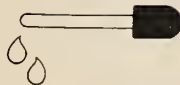
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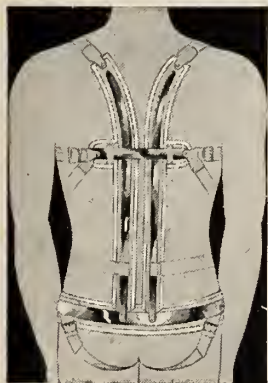
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1. Quigley, T. B., and Renold, A. E.: *New England J. Med.* 246: 1012, 1952. 2. Steinberg, C. L., and Roodenburg, A. L.: *J.A.M.A.* 149: 1458, 1952.

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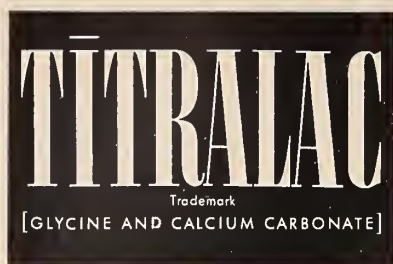
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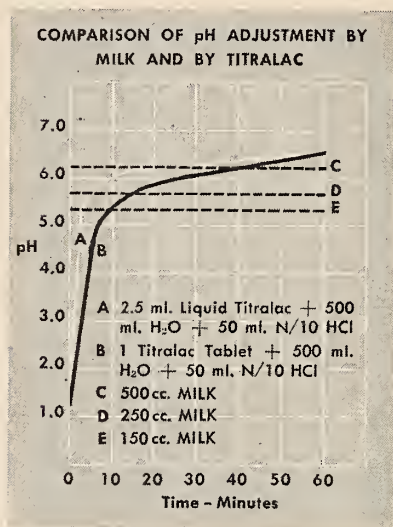
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Armless Hippocrates, Headless King to Carry on as Before

Hippocrates will continue without his arms, and the Persian King Artaxerxes will have to carry on minus his head.

Hippocrates and the Persian king are central figures in a memorial stone sponsored by the American Medical Association 100 years ago, and placed in the interior wall of the Washington Monument some time after the Civil War.

The physical state of Hippocrates, King Artaxerxes and his court came to light recently when Dr. Burt L. Davis of Palo Alto, Calif., and his son walked down the steps inside the 550-foot Washington Monument instead of riding on the elevator. At the 240-foot level, they noticed an almost forgotten stone set in the wall. It is one of 188 memorial plaques from states, organizations, and societies paying tribute to Washington.

Carved in bas-relief is a reproduction of the celebrated painting by Girodel Trioson. It shows Hippocrates spurning gifts from Artaxerxes, king of the Persians. The king tried to persuade Hippocrates to practice among the Persians, who were then enemies of the Greeks. At the base of the stone is the Latin inscription *Vincit amor patriae*—love of country conquers. The heads of three of the figures, including that of the Persian king, had been broken off over the years, and Hippocrates had lost both arms.

On his return home, Dr. Davis wrote the Washington office of the A.M.A. for further details, and that office then started checking various sources. Files of the National Capital Parks, which has supervision over the monument; the Armed Forces Medical Library, and the National Archives were combed. Then the story began unfolding.

At the annual meeting of the A.M.A. in Richmond 100 years ago, a committee was appointed to solicit subscriptions from members for a suitable stone to be placed in the Washington Monument. The committee engaged Lewis Haldy, a marble mason of Lancaster, Pa., and a young sculptor named J. A. Beck, to execute the work on a block of Vermont marble. The stone was exhibited at the A.M.A. meeting in 1855 in Philadelphia, and since only half of the fund had been subscribed (\$501.30), the association voted to pay the remainder (\$493.70). That same year the stone was delivered to the Washington Monument Society and stored in a "lapidarium" on the monument grounds. There it remained through the Civil War. Records are a little vague at this point, but, from information at the National Archives, it was deduced that some time between 1885 and 1887 the memorial stone was placed in the monument.

(Continued on Page 16)

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BOOKS RECEIVED

ADVANCES IN INTERNAL MEDICINE—Volume V—Edited by William Dock, M.D., Long Island College of Medicine; and I. Snapper, M.D., The Mount Sinai Hospital. The Year Book Publishers, 1952. 464 pages, \$10.50.

ARCHITECTURAL PRINCIPLES IN ARTHRODESIS—2nd Edition—H. A. Brittain, M.D., Senior Orthopedic Surgeon, Norwich Hospital. Williams & Wilkins Company, Baltimore, 1952. 196 pages, illustrated, \$8.00.

ATLAS OF SPATIAL VECTOR ELECTROCARDIOGRAPHY—J. Willis Hurst, M.D., and Grattan C. Woodson, Jr., M.D. Blakiston, New York, 1952. 214 pages, \$6.00.

BACTERIAL AND MYCOTIC INFECTIONS OF MAN—2nd Edition—Edited by Rene J. Dubos, Ph.D., The Rockefeller Institute for Medical Research, J. B. Lippincott Company, Philadelphia, 1952. 885 pages, 98 illustrations, \$7.50.

CARBOHYDRATE METABOLISM—A Symposium on the Clinical and Biochemical Aspects of Carbohydrate Utilization in Health and Disease—Edited by Victor A. Najjar, Johns Hopkins Press, Baltimore, 1952. \$4.00.

DERMATOLOGY—Essentials of Diagnosis and Treatment—Marion B. Sulzberger, M.D., Professor and Chairman, Department of Dermatology and Syphilology; and Jack Wolf, M.D., Associate Professor of Dermatology and Syphilology; both of New York University Post-Graduate Medical School. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago, 1952. 592 pages, \$10.00.

DISEASES OF METABOLISM—Detailed Methods of Diagnosis and Treatment, New—3rd Edition—Edited by Garfield G. Duncan, M.D., Director of Medical Division, Pennsylvania Hospital—Clinical Professor of Medicine, Jefferson Medical College, Philadelphia. W. B. Saunders Company, Philadelphia, 1952. 1179 pages, illustrated, \$15.00.

DISORDERS OF THE CIRCULATORY SYSTEM—Edited by Robert L. Craig, M.D. A Symposium—Presented at the Twenty-fourth Graduate Fortnight of The New York Academy of Medicine, October 8-19, 1951. The Macmillan Company, New York, 1952. 304 pages, \$5.50.

ESSENTIALS OF BODY MECHANICS IN HEALTH AND DISEASE—5th Edition—Joel E. Goldthwait, M.D., F.A.C.S., LL.D., Sc.D.; Lloyd T. Brown, M.D., F.A.C.S.; Loring T. Swaim, M.D.; and John G. Kuhns, M.D., F.A.C.S., Sc.D., J. B. Lippincott, Philadelphia, 1952. 356 pages, 135 illustrations, \$6.00.

EXPERIMENTAL DIAGNOSTICS OF DRIVES—Dr. Med. L. Szondi. Translation by Aull. Grune & Stratton, New York, 1952. 220 pages, illustrated, \$13.50.

LUMBAR DISC LESIONS—J. R. Armstrong, M.D., Orthopedic Surgeon at Metropolitan Hospital, England. Williams & Wilkins Company, Baltimore, 1952. 228 pages, illustrated, \$8.00.

MONOGRAPHS IN MEDICINE—Series 1—Editor William B. Bean, M.D., Professor and Head of the Department of Medicine, State University of Iowa. The Williams and Wilkins Company, Baltimore, 1952. 655 pages, \$12.00.

NUTRITION AND DIET IN HEALTH AND DISEASE—6th Edition—James S. McLester, M.D., Professor of Medicine Emeritus, University of Alabama; and William J. Darby, M.D., Ph.D., Professor of Biochemistry, and Director of the Division of Nutrition, Vanderbilt University. W. B. Saunders Company, Philadelphia, 1952. 710 pages, 14 figures, and 145 tables, \$10.00.

OFFICE PSYCHIATRY—The Management of the Emotionally and Mentally Disturbed Patient—Louis G. Moench, M.D., Assistant Clinical Professor of Medicine and of Psy-

chiatry, University of Utah School of Medicine. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago, 1952. 310 pages, \$6.00.

OPHTHALMIC PATHOLOGY—An Atlas and Textbook—Jonas S. Friedenwald, Helenor Campbell Wilder, A. Edward Maumenee, T. E. Sanders, John E. L. Keyes, Michael J. Hogan, W. C. and Ella U. Owens, with the Editorial Assistance of Helen Knight Steward. Published under the joint sponsorship of the American Academy of Ophthalmology and Otolaryngology and the Armed Forces Institute of Pathology. W. B. Saunders Company, Philadelphia, 1952. 489 pages, with 260 plates, \$18.00.

OPIATE ADDICTION—Abraham Wikler. Thomas, Springfield, 1952. 72 pages, \$3.00.

PAIN SENSATIONS AND REACTIONS—James D. Hardy, Harold G. Wolff, M.D., and Helen Goodell. Authors at Cornell. Williams & Wilkins Company, Baltimore, 1952. 435 pages, \$6.50.

PHYSICAL FOUNDATIONS OF RADIOLOGY—2nd Edition—Otto Glasser, Edith H. Quimby, L. S. Taylor and J. L. Weatherwax. Authors are outstanding Radiation Physicists. Paul B. Hoeber, Inc., New York, 1952. 581 pages, illustrated, \$6.50.

POST-OPERATIVE CARE—4th Edition—H. J. B. Atkins, M.D., Director of the Department of Surgery, Guy's Hospital, England. Charles C. Thomas, Publisher, Springfield, Illinois, 1952. 338 pages, illustrated, \$6.75.

PRACTICAL DERMATOLOGY—For Medical Students and General Practitioners—George M. Lewis, M.D., F.A.C.P., Professor of Clinical Medicine (Dermatology), Cornell University Medical College, Secretary, the American Board of Dermatology and Syphilology. W. B. Saunders Company, Philadelphia, 1952. 328 pages with 99 figures, \$7.50.

PROGRESS IN FUNDAMENTAL MEDICINE—Edited by J. F. A. McManus. Lea & Febiger, Philadelphia, 1952. 316 pages, \$9.00.

PSYCHIATRIC AIDE EDUCATION—Bernard H. Hall, M.D.; Mary Gangemi, R.N., Litt.M.; V. L. Norris, A.B.; Vivienne Hutchens Vail, A.B., P.A.; and Gordon Sawatsky, A.B., P.A. The report of an experiment conducted by The Menninger Foundation in cooperation with The Topeka State Hospital, under a grant from The Rockefeller Foundation. Grune & Stratton, New York, 1952. 168 pages, \$5.75.

PSYCHOLOGY OF PHYSICAL ILLNESS—Psychiatry Applied to Medicine, Surgery and the Specialties—Edited by Leopold Bellak, M.D., Clinical Assistant Professor of Psychiatry, New York Medical College. Grune & Stratton, New York, 1952. 243 pages, \$5.50.

RHEUMATIC DISEASES—Diagnosis and Treatment—Eugene F. Traut, M.D., F.A.C.P., Associate (Rush) Clinical Professor of Medicine, University of Illinois. The C. V. Mosby Company, St. Louis, 1952. 942 pages, 192 illustrations, \$20.00.

STERILITY—Its Cause and Its Treatment—J. Jay Romer, M.D., Charles C. Thomas, Publisher, Springfield, Illinois, 1952. 424 pages, illustrated, \$12.50.

SURGERY OF THE EYE—Third Revised Edition—Meyer Wiener, M.D., Emeritus Professor of Clinical Ophthalmology, Washington University School of Medicine; and Harold G. Scheie, M.D., D.Sc., F.A.C.S., Associate Professor of Ophthalmology, The Medical School and Hospital, and Assistant Professor of Ophthalmology, Graduate School of Medicine, University of Pennsylvania. Grune & Stratton, New York, 1952. 449 pages, \$15.00.

THIS IS YOUR WORLD—Harry A. Wilmer, M.D., Physician, Psychiatrist, and ex-patient. Charles C. Thomas, Publisher, Springfield, Illinois, 1952. 165 pages, illustrated, \$5.50.

X-RAY DIAGNOSIS OF CHEST DISEASES—Coleman B. Rabin, M.D., Staff of the Mt. Sinai Hospital, New York. The Williams and Wilkins Company, Baltimore, 1952. 200 pages, 300 illustrations, \$12.00.

FORTHCOMING

HISTORY OF COMMITTEE FOR RESEARCH IN PROBLEMS OF SEX. National Research Council, Edited by Aberle and Corner. Saunders. Due March, 1953. Price not set.

SURGICAL FORUM 1952—By American College of Surgeons. Saunders. Due March, 1953. Price not set.

AMEBIASIS—Pathology, Diagnosis and Chemotherapy—By Anderson, Bostick and Johnstone. Thomas. Due 1953. Approx. \$10.00.

ATLAS OF SURGICAL EXPOSURES OF EXTREMITIES—By Banks and Laufman. Saunders. Due March, 1953. Price not set.

NON-TUBERCULOUS DISEASES OF THE CHEST—Edited by Banyai. Thomas. Due 1953. Approx. \$18.50.

NASH'S SURGICAL PHYSIOLOGY—2nd Edition—By Blades. Thomas. Due 1953. Approx. \$13.75.

ROENTGEN, RADIUM AND RADIOISOTOPE THERAPY—By Delario, et al. Lea and Febiger. Due February, 1953. Price not set.

CLINICAL ROENTGENOLOGY—Developmental and Systemic Conditions and Local Lesions in the Extremities.—By DeLorimer. Thomas. Due 1953. Approx. \$17.50.

EXAMINATION OF THE SURGICAL PATIENT—By Dunphy and Botsford. Saunders. Due March, 1953. Price not set.

DIAGNOSTIC TESTS IN NEUROLOGY—By Wartenberg. Yearbook. Due March, 1953. Price not set.

PATHOLOGY OF THE HEART—By Gould, et al. Thomas. Due January, 1953. Price not set.

ADVANCES IN CANCER RESEARCH—Vol. 1—Edited by Greenstein and Haddow. Academic. Due January, 1953. Price not set.

THE FOUNDERS OF NEUROLOGY—One Hundred and Thirty-three Biographic Sketches by Eighty-six Authors—Edited by Haymaker. Thomas. Price not set.

GYNECOLOGICAL AND OBSTETRICAL PATHOLOGY—By Herbut. Lea and Febiger. Due January, 1953. Price not set.

CLINICAL ENDOCRINOLOGY—2 Volumes—By Hurxthal and Musulin. Lippincott. Due January, 1953. Price not set.

THE GOLD HEADED CANE—By Kerr. Thomas. Due 1953. Price not set.

GYNECOLOGY—Diseases and Minor Surgery—Edited by Lowrie. Thomas. Due 1953. Approx. \$21.00.

ATLAS OF MEDICAL MYCOLOGY—By Moss and McQuown. Williams and Wilkins. Due January, 1953. Price not set.

DISEASES OF THE DIGESTIVE SYSTEM—By S. Portis. Lea and Febiger. Due March, 1953. Approx. \$15.00.

HORMONAL AND NEUROGENIC CARDIOVASCULAR DISORDERS—By W. Raab. Williams and Wilkins. Due February, 1952. Price not set.

MANUAL OF CLINICAL ALLERGY—By Sheldon, et al. Saunders. Due January, 1953. Price not set.

MODERN TREATMENT—A Guide for General Practice—By 48 authors. Edited by Smith and Wermer. Hoeber. Price not set.

THE STANDARD EDITION OF THE COMPLETE WORKS OF SIGMUND FREUD—24 Volumes—Edited by Strachey and Freud. Macmillan. Pre-publication price \$120.00.

OPERATIVE GYNECOLOGY—2nd Edition—By TeLinde. Lippincott. Due January, 1953. Pre-publication price \$20.00.

FUNDAMENTALS OF CLINICAL CANCER—By Goldman. Grune and Stratton. Due February, 1953. Price not set.



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Armless Hippocrates, Headless King to Carry on as Before

(Continued from Page 10)

The decision not to replace the stone, decapitations and amputations notwithstanding, was reached by the Board of Trustees of the A.M.A. after a conference with Edward J. Kelly, superintendent of the National Capital Parks, and other officials. It was agreed that the stone was of such historic value that it had best be left undisturbed.

Lead Poisoning in Children Relatively Common Occurrence

The first place a child puts something is in his mouth. As a result of this habit, lead poisoning in children is relatively common.

Because of the high mortality and the severity of permanent damage in nonfatal cases, poisoning by this metal should be kept in mind, according to Drs. Rudolph C. Giannattasio, Andrew Bedo and Michael J. Pirozzi, Brooklyn. The doctors are associated with the pediatric department, Kings County Hospital.

(Continued on Page 17)



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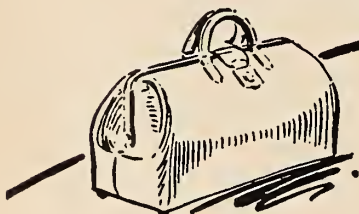
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Lead Poisoning in Children Relatively Common Occurrence

(Continued from Page 16)

The doctors reported on fourteen cases of lead poisoning in children. Two of the cases terminated in death, one child became blind, one suffered paralysis of the left extremities and a residual left facial palsy, one had tremors of both upper extremities, and two had a drooping of the left upper eyelid. In ten of the fourteen cases, definite evidence of brain degeneration was observed.

"The ingestion of paint on window sills and recently repainted walls was the commonest source of lead intoxication in our group," the doctors stated

in a recent issue of the *American Journal of Diseases of Children*, published by the American Medical Association.

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The most common symptoms of lead poisoning were vomiting, abdominal pain, convulsions and constipation. Many of the patients also suffered from a depraved appetite, inflammation of the upper respiratory tract, lethargy, irritability, a dragging of the foot, tremors of the extremities, and pallor.

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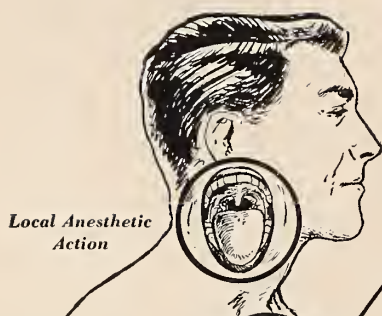
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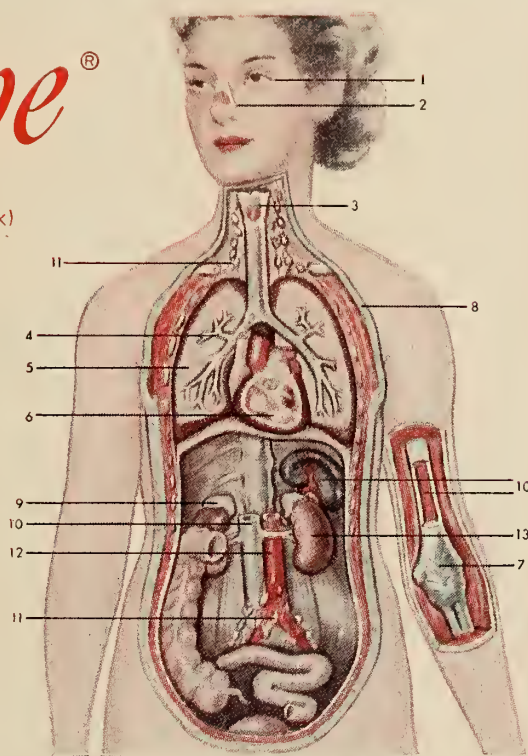
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Urge More Enlightened Attitude Toward Leprosy

Increasing interest in leprosy and the encouraging number of therapeutic agents available open an entirely new vista to the leper, it was stated in a recent issue of the *Journal of the American Medical Association*.

With this improvement in treatment must come a more enlightened attitude toward this disease, according to Drs. George W. Zeluff, Houston, and G. J. Hayes, Alvin, Texas, who added:

"The word leprosy has cast a shadow of terror be-

fore it since times of antiquity. Despite the fact that it is far less contagious than tuberculosis and infinitely less prevalent, leprosy is considered a much greater hazard by the general public and, perhaps, by the medical profession."

Leprosy, the doctors said, is a chronic, indolent, infectious disease. Only 0.1 per cent of the total persons afflicted with it are found in the United States, and the majority of these are found in California, Texas, Florida and Louisiana. There are 5,000,000 other lepers in the poverty-stricken, less enlightened areas of the world. The incubation period of lep-

(Continued on Page 32)

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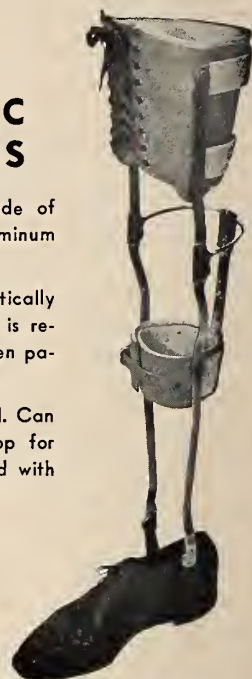
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Urge More Enlightened Attitude Toward Leprosy

(Continued from Page 26)

rosy varies from one to ten years, and the disease is most frequently found in persons in their thirties.

Recent new advances in chemotherapy have made a marked improvement in the prognosis of leprosy, the doctors pointed out. Although all forms of treatment still require months or years, the greater efficacy of such drugs as the sulfones has radically changed the course and future of treatment of early leprosy.

Some gradual breaches in the wall of ignorance, stigma and therapeutic nihilism that has surrounded

the victims of this disease, according to the doctors, are the medical discharge of a patient from the National Leprosarium in Carville, La., while still in the communicable stage of the disease, the removal of the barbed wire from the fence around the hospital, and the discharge of a patient from the leprosarium after six negative bacteriological examinations, instead of the usual twelve.

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Warn Against Habitual Use of Pain-Killing Preparations

A warning that habitual use of such drugs as Bromo-Seltzer (trade mark) and Dr. Miles Anti-Pain Pills may result in poisoning because they contain acetanilid, a relatively toxic drug, was sounded in a recent issue of the *Journal of the American Medical Association*.

Habitual users of these preparations may develop sulfhemoglobinemia, a condition in which there is interference with the vital function of red blood corpuscles to carry oxygen, the article pointed out.

No known treatment is beneficial in cases of sulfhemoglobinemia, and a cure can be effected only by withdrawal of the preparation until the affected red blood corpuscles are replaced, according to the authors of the article, Dr. Telfer B. Reynolds and Arnold G. Ware, Ph.D. Dr. Reynolds is associated with the department of medicine, Hammersmith Hospital,

London, and Dr. Ware with the University of Southern California School of Medicine and the Los Angeles County Hospital.

Most persons suffering from sulfhemoglobinemia have abdominal pains, a slate-colored skin and a blue tint to their lips; they are groggy and weak, and sometimes experience headaches, the doctors stated.

The doctors reported on six cases of sulfhemoglobinemia treated at the Los Angeles County Hospital during a two-year period. One death occurred in a patient whose condition was complicated by bronchopneumonia.

"Whether chronic acetanilid use represents habituation or true addiction has not been settled," the doctors said. "No definite withdrawal symptoms were noted in any of the patients in this series, suggesting that psychic dependence was present rather than true addiction.

"Acetanilid is undoubtedly the substance respon-

(Continued on Page 40)

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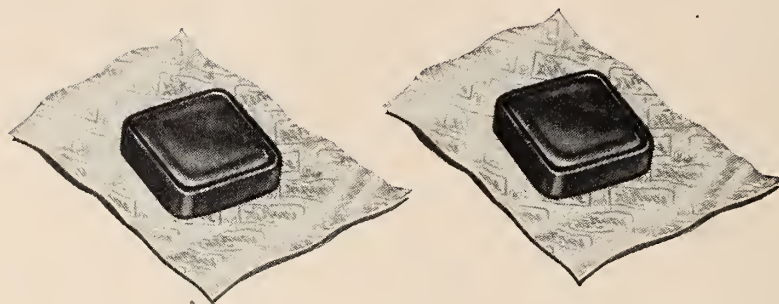
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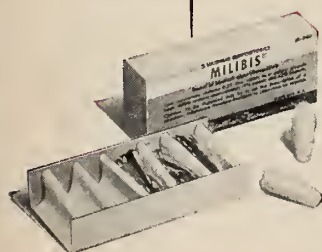
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Warn Against Habitual Use of Pain-Killing Preparations

(Continued from Page 33)

sible for sulfhemoglobin production in our patients."

According to the doctors, habitual users of the preparations rarely will admit taking them, and it is necessary to obtain such information from other sources. The fact that Bromo-Seltzer is so easily obtainable is the probable reason for the high percentage of habitual users, they added.

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Urges Caution in Treatment of Renal Tuberculosis with New Drug

Physicians were urged to exercise caution in the use of the new drug isonicotinic acid hydrazide for the treatment of renal tuberculosis as serious complications may arise.

When kidney excretion is impaired, the drug may accumulate in the blood of the uremic patient causing serious convulsions, it was reported in a recent issue of the *Journal of the American Medical Association*. Muscle twitching, spasms and liver damage also may be caused by retention of the drug.

Although this drug is effective in the treatment of kidney tuberculosis and improves the bladder lesions, the precaution of making blood tests to

(Continued on Page 41)

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Urges Caution in Treatment of Renal Tuberculosis with New Drug

(Continued from Page 40)

determine retention is absolutely necessary, according to Dr. John K. Lattimer, New York. The optimum dosage and duration of treatment have not yet been determined, it was added by Dr. Lattimer, who is associated with the Squier urological clinic, Columbia University College of Physicians and Surgeons, and the research unit for genitourinary tuberculosis, Veterans Administration Hospital, Bronx.

When not used in combination with such time-tested tuberculosis drugs as streptomycin and p-aminosalicylic acid (PAS), the new drug presents limi-

tations, Dr. Lattimer stated. The presence of large amounts of necrotic tissue in massive kidney lesions renders the drug ineffectual in sterilizing the urine, and resistance to the drug may be developed by the tubercle bacilli in from two to eight weeks.

However, he added that the combination of streptomycin, PAS and isonicotinic acid hydrazide may greatly increase their effectiveness and further defer the development of drug resistance.

"Five years of bacteriological, symptomatic and roentgenologic follow-up appears to justify the conclusion that modern chemotherapy can at least modify the lethal course of renal tuberculosis," Dr. Lattimer concluded.

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5. Nonhemolytic streptococci	Some cases of endocarditis, genito-urinary tract infections

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JANUARY 1953

Number 1

The Two Kinds of Death of William Harvey

WILLIAM S. McCANN, M.D., Rochester, N. Y.

IN THE FAMOUS DE MOTU CORDIS in 1628 William Harvey made the following statement:

"This is evidence of two kinds of death, failure from a lack, and suffocation from an excess. In these examples of both, one may find proof before his eyes of the truth spoken about the heart."

After more than three centuries we can translate this statement of Harvey into modern terms. If we apply them to the circulation, we have for "failure from a lack" all the conditions characterized by "shock"; while for "suffocation from an excess" we have the various forms of "congestive failure" of the circulation. The *lack* in shock is basically the lack of the volume of blood in circulation: The venous system is underfilled, the venous return is lessened, the output of the heart is thereby diminished and its contractions become rapid and weak. The "excess" in congestive failure may be applied to an excess of volume of blood in circulation: The veins are overfilled, the volume of blood in the lungs is increased, the output of the left ventricle may be high or low, depending upon circumstances which we will discuss later; but, high or low, the output of the left ventricle is less than it was before the onset of decompensation or failure and in any case is inadequate to meet metabolic demands.

Both types of failure of the circulation may occur while the heart is normal but, whether the heart is normal or abnormal, events taking place outside the heart determine whether the circulation fails

• The determining factors in congestive heart failure as well as in shock are more often extra-cardiac than in the heart itself. Carbon dioxide tension in the blood is as important as the oxygen tension. Carbon dioxide is a hemodynamic agent of the first magnitude. It can be quickly increased or decreased by altering the ventilation of the lungs. It is a prime factor in determining whether the circulation fails from a lack or from suffocation by an excess.

from *lack* or from *excess* of effective blood volume.

We see, for instance, that when a coronary artery is occluded the patient may first exhibit evidence of *shock*. The same thing is generally true when myocarditis, such as that of diphtheria, develops. *Congestive failure*, if it follows myocardial injury, is usually a secondary event and owing to factors outside the heart, but principally operating in the lungs which, as I shall try to show you, are the site at which the type of circulatory failure is determined. You will recall that in Carl Wiggers' laboratory Levy and Berne⁷ tried in many ways to produce congestive failure in experimental animals. They produced many types of injury to the heart without causing congestive failure. The only method which succeeded was that of putting a constricting band around the pulmonary artery. By this means they were able to reduce the output of the left ventricle significantly, without incurring a drastic fall in arterial pressure, and at the same time to raise the pressure in the right ventricle and the right auricle.

The right and left sides of the heart are, in a

From the Department of Medicine, University of Rochester, and the Medical Clinic of the Strong Memorial and Rochester Municipal Hospitals.

Guest Speaker's Address presented before the Section on General Medicine at the 81st Annual Session of the California Medical Association, Los Angeles, April 27-30, 1952.

sense, two separate organs, with the pulmonary, the bronchial, and the coronary circulations connecting them.

Traditional thinking about the heart has been to regard the pulmonary circulation as being a very *passive* mechanism for transfer of blood from the right ventricle to the left auricle. Today we have learned that it is *not passive*, but one which by its activity creates a variable resistance to this transfer of blood from right to left. Increase in this pulmonary resistance may accomplish the same result that Levy and Berne produced by a band applied to the pulmonary artery.

The Scandinavian workers v. Euler and Liljes-trand³ showed that the induction of anoxia raised the pulmonic pressure in cats; while the Dutch investigators Dirken and Heemstra¹ showed that this was brought about by the formation of histamine in the lung. Histamine, when acting directly on the pulmonary vessels, causes constriction of the vein and artery and dilatation of the pulmonary capillaries, according to Durwood Smith.¹² It has also been shown that in man the induction of anoxia will raise the pulmonic pressure, as measured by catheterization of the heart; and in experimental work observed by the author it was found that this effect is augmented by increasing the tension of carbon dioxide in the blood. Highly significant correlations have been observed between the tension of carbon dioxide of the mixed venous blood and the ratio of residual air to total pulmonary capacity.

The lack of oxygen and accumulation of carbon dioxide then may increase the vascular resistance to the transfer of blood from the right ventricle to the left auricle. In certain circumstances this resistance can be raised to a level at which the output of the left ventricle is decreased and the pressure raised in the pulmonary artery, the right side of the heart, and the veins. This variable resistance to flow of blood through the lungs is owing only in part to the smooth muscle in the walls of pulmonary arteries and veins. The pressure of air within the alveoli may also increase the resistance to flow through the alveolar capillaries. The importance of this latter factor was strikingly demonstrated by discovery of the mechanism of "tussive syncope,"¹⁰ which had previously been termed "laryngeal epilepsy" by Charcot. A person was observed who had paroxysms of cough which led to syncope followed by convulsions. By catheterizing the heart it was observed that the pulmonary arterial pressure rose to more than 200 mm. of mercury during paroxysmal cough, while the cardiac output and arterial pressure fell to very low levels. The same phenomena occur to a lesser degree in a Valsalva experiment. They must also be quite similar to those occurring in anaphylactic shock, in which the alveoli become immensely

distended, the left side of the heart nearly empty, and the right side engorged with blood.

Most of the recent discussions of the mechanism of congestive failure of the circulation have had to do with the failure of the circulation to deliver enough blood to the tissues to supply the oxygen required by them. But there is fallacy in attempting to explain the phenomena upon the basis of oxygen lack alone.

If a normal man goes to an altitude in the high Andes, the lack of oxygen increases the ventilation of his lungs to a point at which he pumps out carbon dioxide, and increases the alkalinity of his blood, producing the phenomena of "mountain sickness," which are those of "shock." One may observe similar phenomena in carbon monoxide poisoning, in which similar hyperventilation results in hypoxemia and shock; and this may be the case also in alveolar or lobar pneumonia.

On the other hand, it was learned during the war that when healthy men in heavy bombers were cut off from their oxygen supply at levels of 30,000 to 35,000 feet, they died in about six minutes; and the anatomical conditions observed at autopsy were those of congestive failure. In 1934 Hurtado, Kallreider and I³ produced a similar condition in guinea pigs at only 16,000 feet (simulated altitude in a low pressure chamber). We men, who were in the chamber with the guinea pigs, found that our lungs reacted in such a way as to lower the vital capacity and increase the residual air. These changes are such as would aid in preventing or diminishing the loss of carbon dioxide from anoxic hyperventilation, and are among the mechanisms responsible for acclimatization or adaptation to life at high altitude or other forms of chronic anoxia. Such changes—as diminished vital capacity and increased residual air—are regularly observed in congestive failure of the circulation.

The lungs of guinea pigs which we took with us into the low pressure chamber showed congestion of the alveolar capillaries. We did not know it at that time, but such changes are consistent with recent demonstration that histamine is produced in the anoxic lung. Histamine causes capillary dilatation and sluggish flow. It also causes contraction of the pulmonary artery and vein.

To summarize the foregoing: The initial response to anoxia is hyperventilation and hypoxemia and alkalosis and a tendency to shock. With persistence of anoxia lowered vital capacity and increased residual air tend to reduce loss of carbon dioxide. Deeper anoxia, by causing formation of histamine, increases pulmonary vascular resistance and dilatation of alveolar capillaries. At very high altitudes, 30,000 to 35,000 feet, anoxia results in death of

persons with normal hearts in six minutes, and at necropsy the changes observed are those of congestive failure.⁸

The foregoing sequence of events may occur in the development of congestive failure due to abnormality of the heart, so that it cannot increase its output sufficiently to meet metabolic demands. When congestive failure is due to heart damage, the developing anoxia causes hyperventilation and hypocapnia (low alveolar and arterial carbon dioxide tensions), and an initial tendency toward shock may be observed, as in left ventricular infarction. The sequence of events which mark the transition to congestive failure can be beautifully explained by the nature of changes occurring in the lungs. The increased pulmonary resistance, due to both vascular and bronchial changes, raises the pressure in the right heart and veins. This reaction would serve to protect the weakened left heart from "suffocation by an excess" of blood driven into it by a stronger right heart. I have referred to this as the "check valve" action of the lung, but I am not sure it is a good term to describe the protective variable resistance by which the lung prevents overdistention of a weakened left ventricle. A further aspect of this protective action is to be seen in the fact that excess blood thrown into alveolar capillaries may be recirculated back to the right heart through the bronchial veins. These bronchial veins are distended and in long-standing heart disease such as mitral stenosis varicosities develop from which the blood spitting of this disorder may occur.⁴

The reaction of a normal ventricle to increase in vascular resistance to its discharge is to increase its output; and conversely, when the output of a ventricle decreases, the vessels into which it discharges tend to constrict to accommodate a lesser input. Thus as the resistance in the anoxic lung may increase the right ventricular output, the excess blood thrown into it may be drained off through the bronchial veins, and at the same time the lessened output of the left ventricle would be discharged into constricted arterioles. This may be one of the principal reasons why the kidney then produces less urine and retains salt and water.

The development of edema and the building up of the circulating blood volume represent a complex series of events. With the output of salt and water by the kidneys diminished, ingestion of salt and water will produce an increase in body water and weight. In the capillaries of the body, permeability is increased by anoxia—and lymph is formed at an excessive rate. As the lymph sacs fill, the flow of lymph through the thoracic duct would meet the resistance of rising venous pressure. Ultimately the rising volume of lymph and tissue water will raise tissue pressure to the point at which lymph will flow

from duct to vein, and also will drive venous blood to the right auricle with increasing pressure. A balance between rising lymph and venous pressure may ultimately be struck at a higher level of blood volume.

The failure of the lung to maintain adequate ventilation results in a form of congestive failure of the circulation which differs in several important respects from that which we have described following a primary injury to the heart: The high resistance of the lung to transfer of blood is a primary condition of the failure, instead of being built up gradually as a secondary phenomenon; there is anoxia with hypercapnia in contrast to the anoxia with hypocapnia of initial heart failure. In primary pulmonary failure the blood volume is as high as it becomes in heart failure, but in the former the circulation time is greatly shortened and even when congestive failure occurs the circulation time may be found within normal limits, and the resting cardiac output may remain within normal limits. Secondary hypercapnia may occur due to changes within the lungs, which tend to compensate the initial hypocapnia.

This contrasting set of conditions led McMichael¹¹ to divide congestive failure into two types—one with high and one with low cardiac output. The high output failures are those in which the heart is relatively normal and in which the right ventricle is threatened with "suffocation with an excess" of venous blood rushing down upon it like a flash flood in an arroyo. The situation of the right ventricle is somewhat like that of the left ventricle in the case of primary heart failure, in that the damaged left heart might be overwhelmed by the normal output of the right heart were it not protected by increased resistance in the lung.

Are there any "check valves" which can protect the right heart in the same way in which the lungs protect the left? It would seem likely that the liver is capable of functioning in this capacity. Dock and Tainter² introduced the idea of an hepatic sphincter, and this became a much disputed point. It seems likely, in the light of more recent work, that there may be multiple small sphincters in the liver at the point where the liver sinusoids enter the central lobular vein. These sphincters are relaxed in thiamine deficiency and this may be one of the reasons why in persons with beri beri the heart shows a high output in failure.

The carbon dioxide tension may also regulate the patency of these sphincters. High tensions of carbon dioxide in general produce dilatating effects on the vascular system, but there is some evidence that the portal blood flow is retarded (possibly at the central lobular end of the sinusoids). It offers an attractive hypothesis that hypercapnia constricts

the hepatic sphincters, but the evidence is not entirely clear. As "check valves" the liver and the lungs have many analogies. The normal main inflow is venous in each, the arterial supply, hepatic or bronchial, has a nutrient function and offers collateral channels with numerous anastomoses — which may act as shunts.

Arteriovenous anastomoses and shunts play a large role in the "high output" failures. Their patency is increased in the hypercapnia of the failing lung, and in the thiamine deficiency of beri-beri. Arteriovenous aneurysms lead ultimately to high output failures. The enlarged vascular channels in the bones in Paget's osteitis deformans have a similar effect. All of these conditions require a larger circulating blood volume and afford rapid transfer of blood from the arterial to the venous side, and create a continued threat of overwhelming the right heart by a flood of venous blood. Factors which would increase the vascular resistance in the liver and in the lung (the check valves) would have a protective function on the respective ventricles, preventing them from being overwhelmed by an on-rushing flood. Probably we should no longer speak of "passive congestion" of the lungs or of the liver. Congestion appears to be due to activity and not passivity within the circulation of these organs, brought about by the action of substances like histamine, and by changing tensions of carbon dioxide and oxygen and of electrolytes.

The "low output type" of congestive failure is the one most generally associated with abnormality of the heart, while the "high output type" is the result of abnormality of extracardiac mechanisms. Low output failure is the more likely to respond to digitalis, which is notoriously unreliable in high output failure. Low output failure, at least in its earlier stages, can be roughly equated with hypocapnia; and high output failure with hypercapnia. Opiates may be useful in low output failure by decreasing

overventilation and decreasing loss of carbon dioxide. On the other hand morphine tends to increase hypercapnia of high output failure, and may be lethal in its effect.

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Serum Lipids in Normal and Abnormal Subjects

Observations on Controlled Experiments

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FOR MORE THAN two generations the pathogenesis of atherosclerosis has been a controversial subject. Despite the improvement in chemical techniques, and in the understanding of some aspects of lipid metabolism, recent additions to the literature have tended to confuse further rather than to clarify. Perhaps the greatest single reason for this has been the tendency on the part of some investigators to confuse theories with facts, and prematurely to attach clinical significance to inadequately controlled laboratory observations. It may, therefore, be well to consider briefly which portions of the field are truly in a factual state and which are theoretical.

Many of the papers on which the following statements are based are reviewed in an excellent paper by Weinhouse.⁶

FACTS

The following concepts regarding atherosclerosis appear to be unequivocal:

1. There is an increasing incidence with age.
2. The incidence is high in patients with diabetes.
3. There is increased incidence in obese persons.
4. There is increased incidence in some, but not in all, patients with hypercholesterolemic atheromatosis.⁷

THEORIES

To attempt to cite all the theoretical material would entail voluminous report. Following, however, are some of the more interesting controversial statements:

1. A high intake of dietary fat predisposes to atherosclerosis.
2. A diet high in cholesterol predisposes to atherosclerosis.

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These studies have been supported in part by grants from the National Institutes of Health and from the Armour Laboratories.

Presented before the Section on General Medicine at the 81st Annual Session of the California Medical Association, Los Angeles, April 27-30, 1952.

• The relationship of diet to serum lipids and to atherosclerosis is a controversial subject. The data presented indicate that diets containing very large amounts of vegetable fat are consistently associated with a sharp fall in serum cholesterol and phospholipid, whereas administration of equal amounts of fat of animal origin is associated with a rise of the serum lipids to levels noted on an average mixed diet.

In critical evaluation of elderly hospitalized diabetic patients with advanced atherosclerosis it was observed that there was close mathematical correlation between serum content of cholesterol, "lipoproteins," and phospholipids. There was no obvious correlation between the degree or kind of atherosclerosis and any one of the lipid entities followed. Coronary occlusion occurred in a patient with one of the lowest levels of cholesterol and of lipoprotein.

3. "Lipotropic agents" prevent or favorably modify atherosclerosis.

4. Atherosclerotic subjects have larger amounts of lipids, particularly cholesterol, in the serum than do others.

5. Patients with atherosclerosis have a greater than normal amount of certain "giant molecules" (lipoprotein Sf₁₀₋₂₀) in the serum.²

At one time or another each of the foregoing statements has been enthusiastically acclaimed as being factual. To many an unprejudiced observer, none of them, when subjected to objective scrutiny, has been acceptable.

LABORATORY AND CLINICAL OBSERVATIONS

Two groups of data will be presented here. In one group are data on observations of patients whose dietary intake was chemically constant (by formula) and who were studied over long periods on the metabolic ward of Highland Alameda County Hospital. In the other group are data on observations (some of them previously reported elsewhere) of patients in the wards of the chronic disease hospital that is associated with the same hospital.

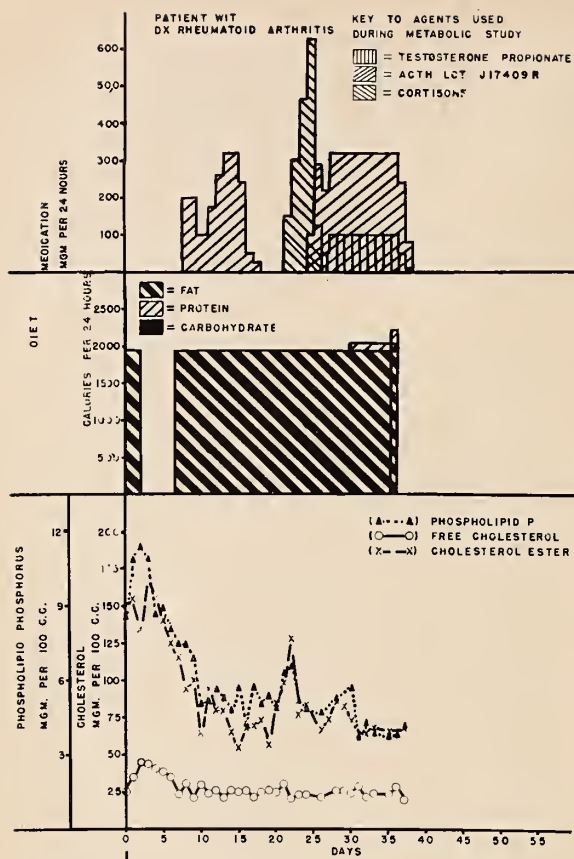


Chart 1.—Changes in serum lipids during “pure fat” intake.

METHODS

Lipid phosphorus was determined by the method of Youngburg and Youngburg.⁸ Cholesterol and cholesterol esters were determined by the method of Michaels and co-workers,⁴ a modification of the Schoenheimer-Sperry technique.⁵ Lipoproteins were quantitated by an ultracentrifugation technique.*

Dietary Modification of the Level of Certain Serum Lipids

These data were obtained in the course of somewhat extensive studies dealing with various aspects of lipid metabolism in human subjects. As part of a program designed to evaluate hormonal factors which regulate fat oxidation, it was necessary to maintain patients on pure fat diets and on diets containing only fat and protein. These diets, in most instances, were administered at hourly intervals throughout the 24 hours through a polyethylene tube, the tip of which lay in the duodenum. The fat, unless otherwise indicated, was of vegetable origin.

In Chart 1 will be noted the changes in serum content of esterified and free cholesterol and of

*Grateful acknowledgment is made to Dr. John Gofman for performance of these determinations.

phospholipids in a patient maintained on a pure fat diet over a period of approximately a month. It will be noted that in this patient, a rather precipitous fall in serum cholesterol esters occurred, with an equivalent fall in phospholipids; and that this fall was maintained throughout the period for which the diet was administered. Initially, it was thought that this change in serum lipids was referable to hormonal therapy, but subsequently this was found to be incorrect (see below).

In Chart 2 is recorded another study in a patient with acromegaly and diabetes who also had pronounced decrease in the serum content of the lipids above noted. The fall in total cholesterol approached 150 mg. per 100 cc. of serum.

Chart 3 gives data on a similar study of a patient with thyrotoxicosis. A decrease in serum content of lipids was maintained during the period of high fat diet, but there was a rapid return of the content of lipid entities to previous levels when the patient resumed an average mixed diet. The rise occurred despite the continuation of hormonal therapy.

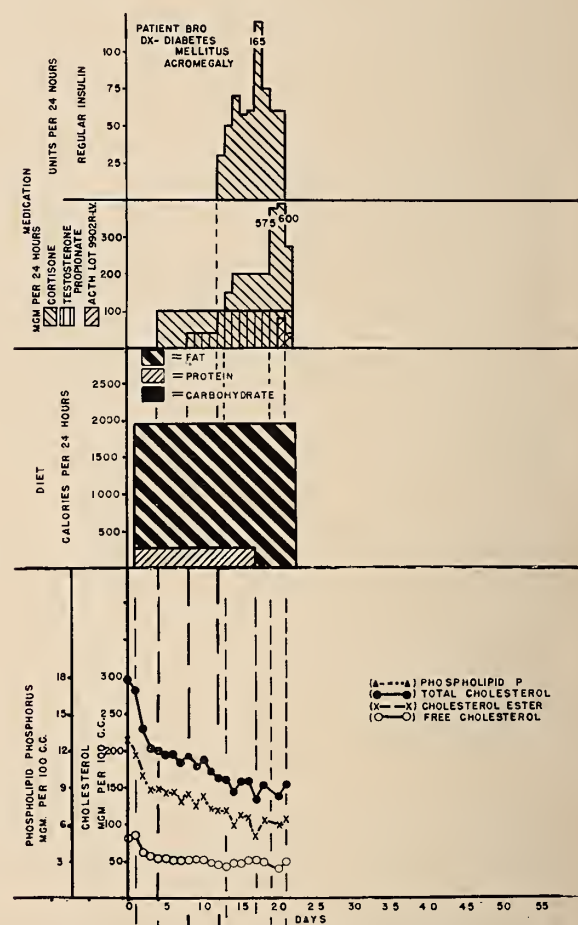


Chart 2.—Serum lipid changes during fat-plus-protein, and then pure fat intake.

The preceding observations obviously raised, among others, the question as to whether these changes in serum lipids were related specifically to some factor present in the vegetable fat, or whether they were referable to the absence of cholesterol or of other sterol or phospholipid entities normally present in a mixed diet. With this in mind a patient in whom a change similar to that noted above had occurred was placed on a diet high in vegetable fat, to which was subsequently added 30 grams and later 60 grams of cholesterol a day (Chart 4). It will be noted in the chart that no maintained in-

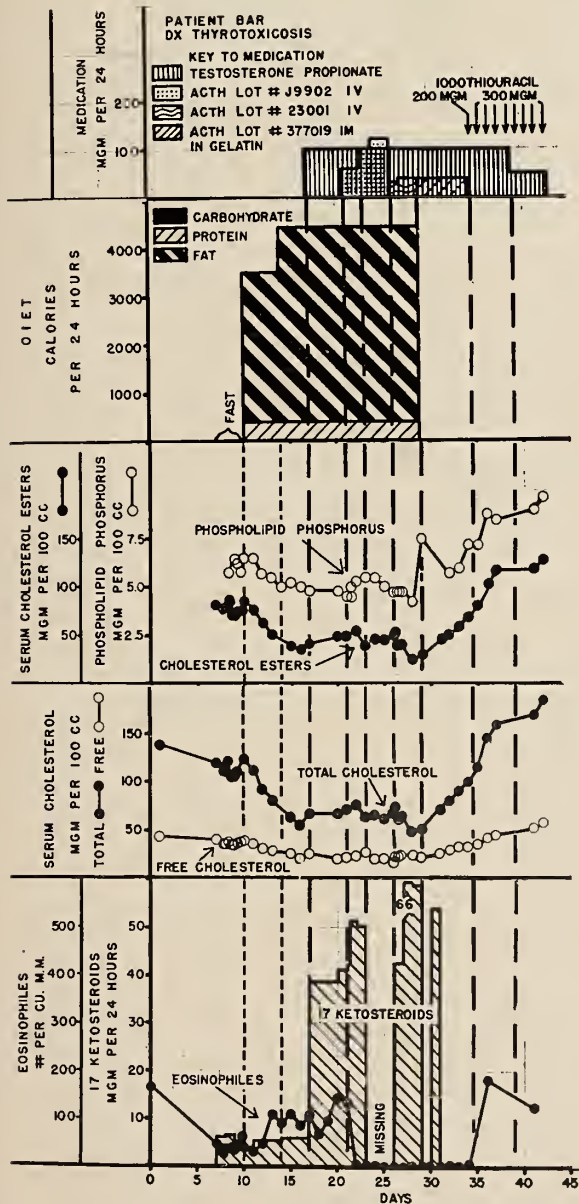


Chart 3.—Increase in serum lipids following substitution of an average mixed diet for a high fat, low protein diet.

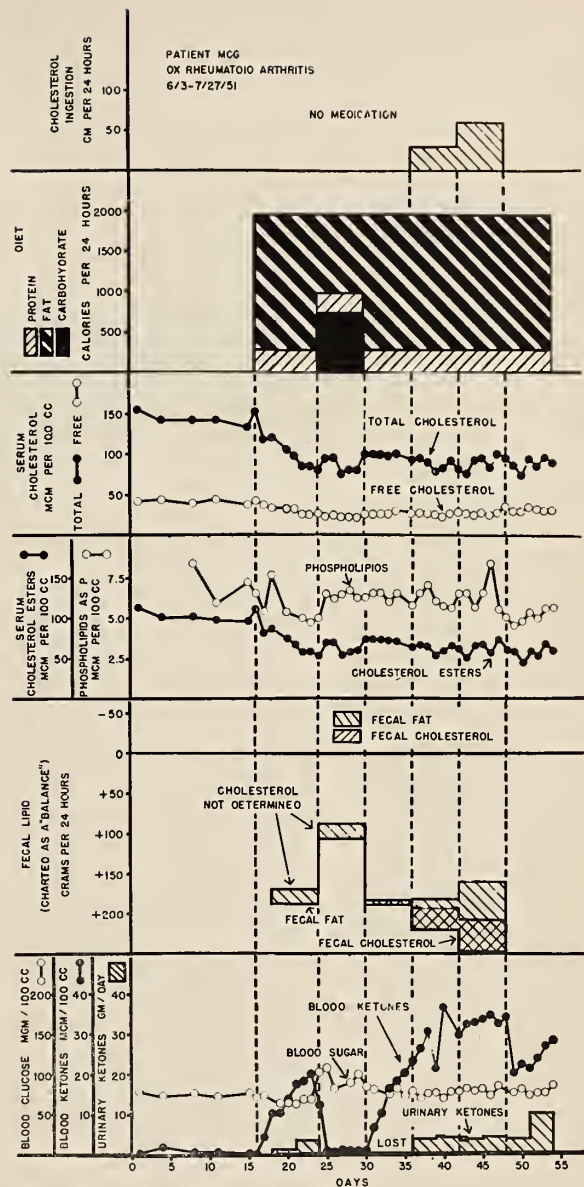


Chart 4.—Effect of addition of cholesterol to vegetable fat, upon serum lipids.

crease in serum content of cholesterol or phospholipids occurred during the period of ingestion of the huge amount of cholesterol. Analysis of the stool indicated that the greater portion of the administered cholesterol had been absorbed, although a considerable amount was contained in the stool. Inasmuch as the period of cholesterol administration was short, it is possible that long continued cholesterol administration might have produced some change in cholesterol content in the serum. (This possibility is now being investigated.)

From the foregoing it may be concluded that the ingestion of a large amount of vegetable fat is compatible with a rather striking fall in the serum

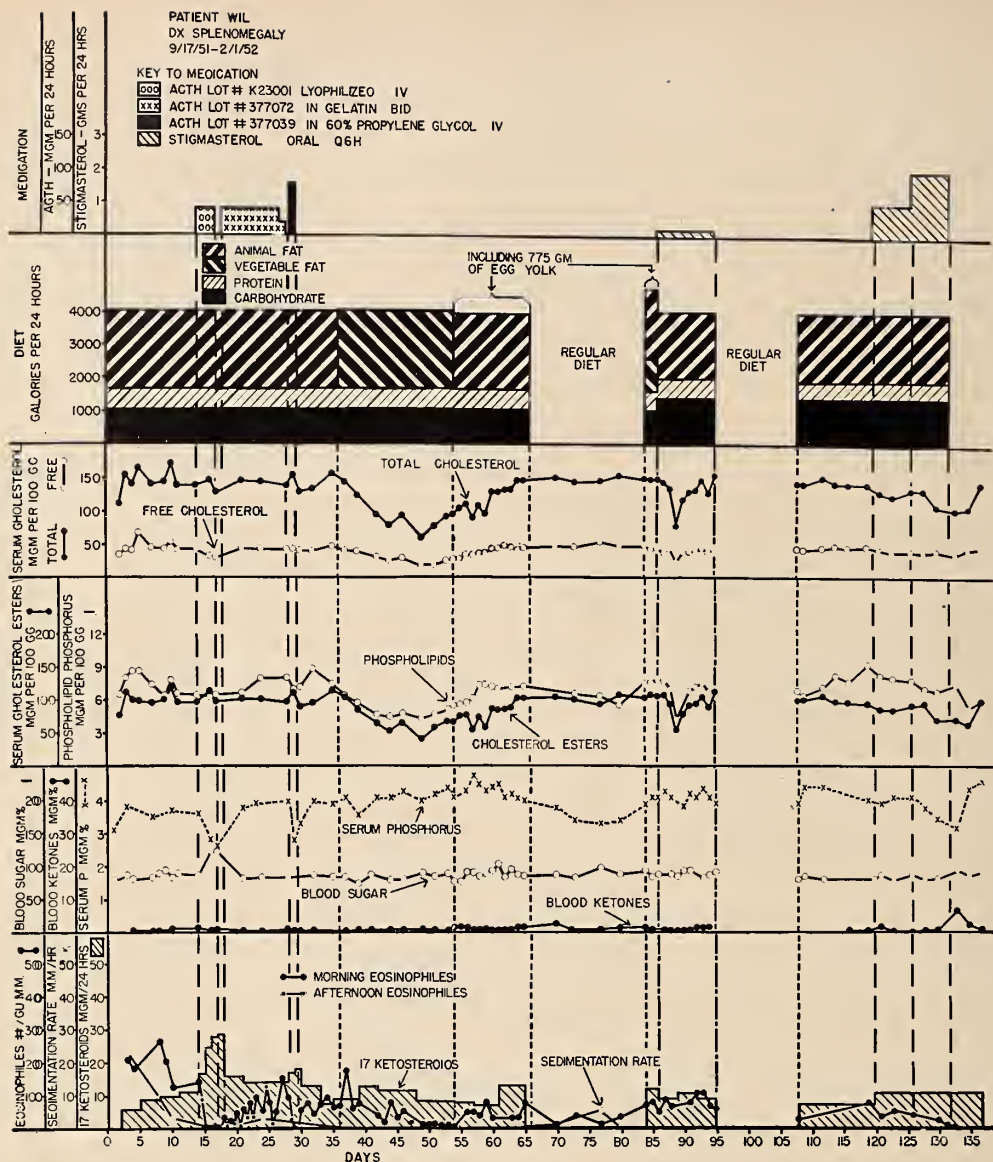


Chart 5.—Effect of different dietary fats upon serum lipids.

content of certain lipids. Similar observations were made in 14 patients, all studied for rather long periods.

Studies also were carried out in which patients received equal amounts of fat, of vegetable, animal and egg yolk origin, respectively, for stated periods. The results are given in Chart 5. From this and other studies, it was apparent that the ingestion of very large amounts of fat of animal and egg yolk sources (the total egg yolk being equivalent to 36 eggs daily) resulted in serum content of cholesterol and phospholipid essentially identical with the content of these factors in persons receiving an average mixed diet. That serum content of lipids decreases when vegetable fat is the source of dietary fat was further confirmed.

Studies on Diabetics with Advanced Atherosclerotic Changes

The following data were obtained from study of 24 elderly patients with diabetes, all with major evidence of atherosclerosis, including extreme degrees of peripheral vascular disease and major evidence of coronary artery and cerebrovascular disease.¹ These patients were receiving relatively constant "diabetic" diets. Specimens of blood were obtained at frequent intervals throughout the period of observation. The serum content of esterified and free cholesterol and of phospholipids was determined and in addition the lipoprotein (Sf_{10-20}) content was determined by tests of samples of the same specimens of blood that were used in determining

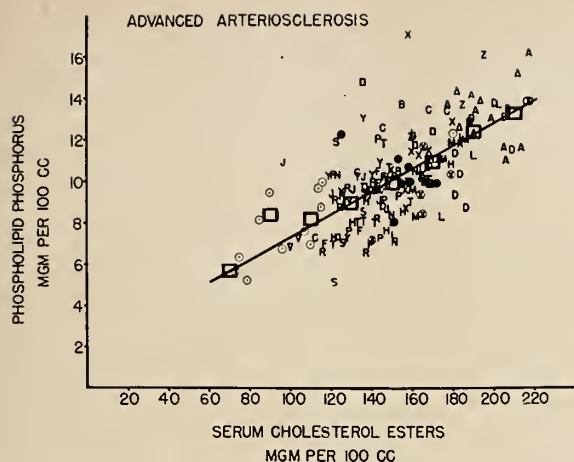


Chart 6.—Correlation of serum phospholipids and cholesterol esters in a group of elderly diabetic atherosclerotic patients. The correlation index is 0.671.

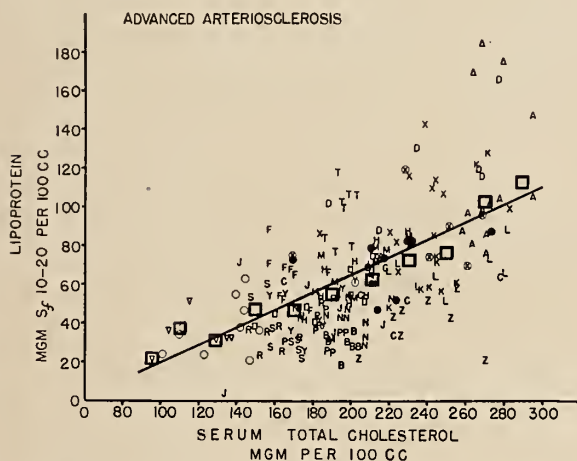


Chart 7.—Correlation between serum "lipoprotein" and total cholesterol. The correlation index is 0.613.

the content of the other lipids. The objectives of the study were two:

1. To determine whether there was any obvious correlation between the atherosclerotic status of the patient and the content of any lipid fraction in the serum.
2. To determine whether there was any obvious correlation between any or all of the lipid entities studied.

In Chart 6 are shown the phospholipid and cholesterol ester data plotted against one another on a linear scale. It will be noted that there was a remarkable scatter of values, and further that there was a pronounced "linear" mathematical correlation between the phospholipid phosphorus and the serum cholesterol esters with a correlation index of 0.671.

In Chart 7 are shown the observations with regard to the aggregate amounts of all the cholesterol and of all the lipoprotein fractions studied. Here also there

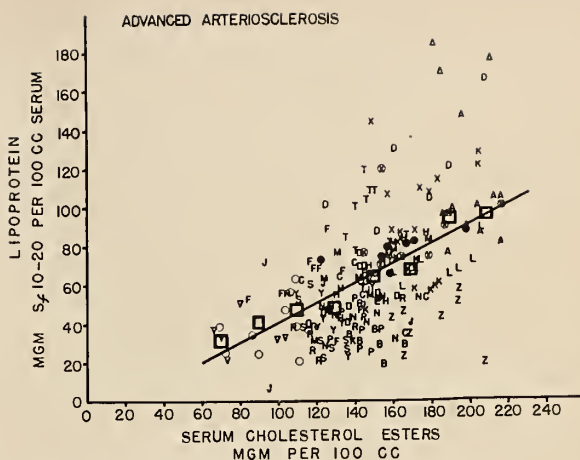


Chart 8.—Correlation between serum "lipoprotein" and cholesterol esters. The correlation index is 0.530.

was pronounced scatter insofar as both entities were concerned, and rather impressive "linear" correlation. The index of correlation was 0.613.

Chart 8 gives a similar comparative evaluation of the data in regard to the lipoprotein and serum cholesterol esters.

From the foregoing data it is apparent that rather close correlation existed between lipoproteins and total cholesterol, lipoproteins and cholesterol esters, and phospholipids and cholesterol esters.

It is apparent also that in this group of patients, all of whom had advanced atherosclerosis, a very wide scatter of all lipid values existed (the range for total cholesterol 134 to 272 mg. per 100 cc.; for lipoprotein, 29 to 176 mg. per 100 cc). In no instance was there obvious correlation between clinical status and the serum content of any lipid. The one patient in this series who had a coronary occlusion during the course of the study had the lowest value for cholesterol (134 mg. per 100 cc. of serum) and the third from the lowest value for lipoprotein (33.5 mg. per 100 cc. of serum).

It may be of some interest that the average serum content of cholesterol and phospholipids was significantly higher in this group than in a group of non-diabetic elderly persons without obvious clinical evidence of atherosclerosis, who were hospitalized in the same institution.

CONCLUSIONS

No positive clinical implications are suggested or intended insofar as the preceding data are concerned. It is possible that at a later date some such implications may appear. On the basis of the data, however, the following rather unequivocal statements may be made:

1. The intake of a large amount of vegetable fat is compatible with a quite impressive fall in serum

content of cholesterol and phospholipids. Whether this is referable to the lack of cholesterol and of phospholipids in the vegetable fat, or to the *presence* of some material which actually modifies lipid metabolism, or to the absence of factors in other foods that are in a normal diet, is at present unknown. The addition of a very large amount of cholesterol to the high-fat diet in one instance resulted in no increase in serum content of cholesterol.

2. There was no obvious correlation between serum content of any of the lipids studied (total cholesterol, cholesterol esters, phospholipids, and lipoprotein) and the severity or rate of progression of the atherosclerotic process in a group of elderly diabetic patients with advanced atherosclerosis.

3. Close linear correlation was observed between the serum content of phospholipids and of serum cholesterol esters; between lipoproteins and serum cholesterol esters; and between lipoproteins and serum total cholesterol. The index of correlation between cholesterol and lipoprotein was almost iden-

tical with that reported by Keys³ in reevaluation of data previously reported by Gofman and co-workers.²

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Subperitoneal Hemorrhage

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SUBPERITONEAL HEMORRHAGE encountered at operation, or observed at autopsy, has usually been reported as an uncommon and puzzling condition in which loss of blood had not been suspected.

In 1941, after experience with four cases and review of the literature, Cushman and Kilgore² described a series of signs and symptoms which it was believed would lead to clinical diagnosis in many instances. The initial symptom of the syndrome is dull, constant abdominal pain, sudden in onset and usually accompanied by nausea. Vomiting aggravates discomfort instead of bringing relief. Continued bleeding increases the intensity of the pain, owing to the gradually enlarging hematoma confined between leaves of a mesentery or beneath visceral peritoneum. There is apprehensive stirring and turning in vain search for a position of comfort. When bleeding stops, the pain gradually subsides, only to return on resumption of hemorrhage, which may be incited by eating, catharsis, retching or effort. Although bleeding doubtless very frequently stops and does not recur, these episodes of subsidence and return of pain, indicative of intermittent bleeding, have been repeatedly noted in reports of cases of proven subperitoneal hemorrhage. Several episodes may occur within a few hours, or the period between them may be several days.

Physical examination early in this phase before peritoneal rupture seldom reveals more than local tenderness without muscle rigidity. Later, if there has been considerable bleeding, the mass of the hematoma (in some locations) may be felt on careful palpation.

Normal pulse and blood pressure often give a false sense of security, even with rapid loss of blood in a short period of time. If hemorrhage is suspected, rapidly raising the patient to an upright position may cause definite increase in pulse and drop in pressure—the earliest objective evidence of acute loss of blood. Determination of the erythrocyte content of the blood and hematocrit estimations are also of little diagnostic value in the first few hours, but are invaluable as a baseline, since progressive anemia is confirmation of the clinical diagnosis.

If recurrences of bleeding are sufficiently far

• Clinical diagnosis of subperitoneal hemorrhage can be made in a substantial percentage of cases by recognition of a quite constant syndrome—provided the possibility of bleeding is considered. Progressive anemia, as indicated by repeated counts of erythrocytes in the blood or by hematocrit determinations, is confirmation of the diagnosis.

The majority of patients recover spontaneously under conservative management.

Surgical intervention is indicated if repeated episodes of hemorrhage occur or if the volume of circulating blood cannot be maintained by repeated transfusions of whole blood.

apart, successive drops in erythrocyte content with gradual recovery between incidents supplies dramatic proof of the diagnosis.

PERITONEAL RUPTURE

If hemorrhage continues, slowly or rapidly, with or without remission, the overlying peritoneum ultimately ruptures. This is heralded by sudden excruciating exacerbation of pain, with shock which is often profound and frequently fatal. If the patient survives this, early abdominal examination reveals diffuse soreness and exquisite rebound tenderness without muscle guarding, which gradually merges into increasing rigidity with distention—the picture of hemoperitoneum with peritonitis and its concomitant adynamic ileus.

The etiologic delineation is that of apoplexy in general. Subperitoneal hemorrhage is twice as common in males, with greatest incidence in those with obvious vascular disease.

Onset is frequently precipitated by trauma or strain—often so minor in character as to seem insignificant. The source of bleeding is a branch of the superior mesenteric artery in nearly 75 per cent of cases.

The previously mentioned report on this condition,² published in 1941, was based on 22 cases—too few for statistical evaluation. The author now has reviewed data on 49 additional cases, including four personally observed, a total of 71, to assess the validity of description of the condition as a syndrome and to evaluate treatment.

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Presented before the Section on General Surgery at the 81st Annual Session of the California Medical Association, Los Angeles, April 27-30, 1952.

TABLE 1.—Classification of 71 Cases of Subperitoneal Hemorrhage

Operation	Total Cases	Average Duration of Symptoms (days)	Subsidence and Recurrence—Cases	Per cent
Hematoma	18	3.1	6	28
Hemoperitoneum	30	10.0	15	50
No Operation				
Died	16	19.5	9	56
Recovered	7		4	59

Fifty of the 71 patients were male. Obvious vascular disease was present in 42 per cent, and history of trauma or strain was noted in 18 per cent (and probably would have been found in many more with meticulous inquiry).

Subsidence and recurrence of pain, progressive anemia, the appearance of a mass and secondary collapse imply sufficient duration of time to permit of recognition of these phenomena. Since the period of observation in these cases was terminated by operation in some instances and by either death or ultimate recovery without operation in others, they have been divided into four groups (Table 1).

Patients in the first and second group were operated upon in the hematoma and the hemoperitoneum phases, respectively. The third group was made up of patients who died without surgical intervention, and the fourth of those who recovered without operation. The average duration of symptoms was three days in the first group, ten days in the second, and 19 days in the group of those that died. No attempt was made to calculate duration of time before diagnosis in those who recovered.

The proportion of cases in which history of subsidence and recurrence of pain was obtained was in direct ratio to the duration of symptoms—28 per cent in the first group, 50 per cent in the second, 56 per cent in the third, and 59 per cent in the cases in which there was spontaneous recovery.

Erythrocyte count, hemoglobin value or hematocrit estimation was recorded in only 39 of the cases, and was repeated in but 13. The erythrocyte content when first determined was above 4,000,000 cells per cu. mm. in 18 cases (46 per cent), and less than 3,000,000 in six cases (15 per cent). Progressive loss of blood was demonstrated in all of the 13 cases in which repeated counts were made.

A palpable mass was recorded in eight cases. In 75 per cent of those patients known to have free blood in the abdomen, the onset could be identified by sudden increase in pain followed by collapse.

It seems evident that these signs and symptoms are quite constant in a substantial percentage of cases (Table 2), and that the syndrome of subperitoneal hemorrhage can lead to clinical diagnosis provided the possibility of bleeding is considered.

SYNDROME OF SUBPERITONEAL HEMORRHAGE

Diagnosis was made clinically in only four of the cases in which operation was done and in none of the cases in which the patient died without operation. Seven cases were diagnosed and the patients treated expectantly without mortality.

Active bleeding at operation was encountered in eight cases and was controlled by pack in two and by ligation in six, with one death. In eight cases resection or exteriorization was performed to prevent recurrence of bleeding, with two deaths. No active bleeding was found and no definitive operation was carried out in the remaining 32 cases, in 12 of which the patient died. The mortality rate for all cases in which operation was done was 32 per cent.

It is obvious that, contrary to general opinion, spontaneous recovery does occur and that operation is not the only method of treatment.

Failure to establish diagnosis led to unnecessary operation in many cases, and in others prevented adequate blood replacement and opportune operative intervention that might have been successful.

If the diagnosis of subperitoneal hemorrhage can be made, there is adequate time in most instances to replace lost blood. In many cases bleeding may cease and not recur, making operation unnecessary.

If it becomes apparent that operation is inevitable, either because of repeated episodes of hemorrhage or failure to maintain blood volume despite repeated transfusions, the chance of successful intervention is greatly enhanced by adequate preparation for definitive surgical procedure.

Presence of hemoperitoneum in itself is not an indication for operation. Attention should be directed toward bringing attendant shock under control. When that is done, it may be apparent that bleeding has ceased.

Surgical treatment of subperitoneal hemorrhage is a formidable operation since it frequently requires bowel resection—no simple procedure in the face of massive hematoma or hemoperitoneum. Discovery of an active bleeding point is fortuitous, seldom occurs, and should not be expected.

It is impossible to estimate the proportion of cases in which operation will be necessary, but personal

TABLE 2.—Incidence of Signs and Symptoms in Cases of Subperitoneal Hemorrhage

	Per cent
Vascular disease.....	64
Trauma or strain.....	18
Palpable mass (eight cases).....	11
Subsidence and recurrence of pain.....	46.5
Initial evident anemia.....	54
Progressive anemia.....	100
Sudden collapse with hemoperitoneum	75

experience with eight patients, three subjected to exploration without definitive operation and the remaining five treated without operation, leads the author to believe that spontaneous recovery is the rule rather than the exception.

CASE REPORTS

CASE 1 (Reported through the courtesy of Dr. C. E. Smith): A woman 40 years of age was admitted to St. Joseph's Hospital with history of constant abdominal pain of five days' duration. The next day pain was centered in the right lower quadrant of the abdomen. It was not severe, but persistent and annoying. There was some diarrhea and finally nausea without vomiting.

The temperature was 99.4° F., the pulse rate 96, and respirations 18 per minute. The hemoglobin value was 91 per cent, erythrocytes numbered 4,860,000 per cu. mm. of blood, and leukocytes 17,400—70 per cent polymorphonuclear cells. The urine contained a few pus cells and there was a trace of albumin.

Upon examination local tenderness was noted in the right lower quadrant without rigidity. No mass was palpable. No abnormality was observed upon pelvic examination. The preoperative diagnosis was subacute appendicitis.

The cecum was delivered through a McBurney incision, disclosing a diffuse subperitoneal hematoma involving the ascending colon as far as it could be visualized and extending into the mesentery of the distal two inches of the terminal ileum. The caput of the cecum and the appendix were normal. The appendix was removed and the abdomen closed without disturbing the hematoma. The postoperative course was uneventful, and the patient was discharged on the fifth postoperative day.

It was later learned that the patient had been struck in the abdomen shortly before the onset of pain.

CASE 2 (Reported through the courtesy of Dr. G. D. Delprat): A 57-year-old man became nauseated and diarrhea developed concomitantly with continuous abdominal pain which subsided and recurred at intervals for four days. He then suddenly collapsed while eating in a restaurant and became unconscious. Taken to an emergency hospital for treatment of shock, he was later transferred to St. Luke's Hospital.

The blood pressure was 139 mm. of mercury systolic and 98 mm. diastolic. The erythrocyte content in the blood was 4,000,000 per cu. mm. and the hemoglobin value 67 per cent. Leukocytes numbered 19,200—80 per cent polymorphonuclear cells. The urine contained casts and the reaction for albumin was 4 plus.

There was pronounced tenderness throughout the abdomen with rigidity over the entire epigastrium. The peripheral blood vessels were arteriosclerotic.

The next day erythrocytes numbered 3,770,000 per cu. mm. and the hemoglobin value was 62 per cent.

The day following, the abdomen suddenly became board-like. A diagnosis of carcinoma of the bowel with perforation and beginning peritonitis was made and operation was carried out. When the abdomen was opened, about one pint of dark red free blood was encountered and the transverse colon was observed to be gangrenous. The bowel was rapidly exteriorized and the patient was returned to the ward in poor condition. He died the next morning.

Thrombosis of the superior mesenteric artery and a mesenteric hematoma down to the cecum and along the splenic vessels were noted at autopsy.

CASE 3 (Reported through the courtesy of Dr. Wesley Scott and Dr. Martin Debenham): A woman, 28 years of age, was admitted to St. Joseph's Hospital with complaint of lower right quadrant abdominal pain which started suddenly as she arose from a chair four hours before admittance to hospital. The pain was constant in character but had gradually increased in severity. There had been no nausea or vomiting. There were 3,960,000 erythrocytes per cu. mm. of blood and the hemoglobin value was 73 per cent. Leukocytes numbered 13,050 per cu. mm. Upon physical examination localized tenderness without rigidity was noted in the right lower quadrant of the abdomen.

The preoperative diagnosis was acute appendicitis. Upon operation the appendix was found to be essentially normal and in further exploration a hematoma was observed in a pedunculated lipoma of the parietal peritoneum near the upper end of the incision. This was ligated at the base and removed. The postoperative course was uneventful. There was no evidence of vascular disease at that time or upon reexamination some five years later.

CASE 4 (Presented through the courtesy of Dr. Gilbert M. Barrett): A 65-year-old housewife was admitted to St. Luke's Hospital with complaint of weakness, nausea and constant girdling pain around the abdomen of a week's duration. The patient had vomited once two days before entry. Twenty-four hours later pain developed suddenly on the right side of the abdomen and was still present.

The pulse rate was 60 and the blood pressure 74 mm. of mercury systolic and 58 diastolic. Erythrocytes numbered 2,700,000 per cu. mm. of blood and the hemoglobin value was 54 per cent.

There was pronounced generalized tenderness of the abdomen. A mass was palpated in the right side, slightly higher than the cecum. No abnormality was noted roentgenographically with barium enema. In intravenous pyelograms there was evidence of displacement of the ascending colon to the right. The tentative diagnosis was malignant disease, and transfusions of whole blood were started in preparation for operation.

The pain gradually disappeared, then recurred on the tenth hospital day. Again it subsided, and on the fifteenth day returned. Once more it subsided and the patient was quite comfortable again, but shock developed suddenly on the seventeenth day and the patient died.

At autopsy a large amount of free blood was observed in the peritoneal cavity. It had come from a ruptured laminated hematoma in the mesentery of the terminal ileum. Minimal arteriosclerosis was noted in examination of the heart and blood vessels.

Following is the record of erythrocyte determinations and of transfusions of whole blood:

Day	Erythrocytes per cu. mm.	Transfusion
First	2,700,000	500 cc.
Third	2,700,000	500 cc.
Fifth	2,300,000	500 cc.
Twelfth	2,100,000	500 cc.
Fourteenth	.....	500 cc.
Sixteenth	.....	500 cc.
Seventeenth	1,900,000	

CASE 5 (Reported through the courtesy of Dr. E. L. Bormann): A 6-year-old girl was admitted to the Palo Alto Hospital, January 16, 1949. Thirty-six hours before entry aching pain had developed in the abdomen and it had gradually increased. There had been no nausea or vomiting, and no bowel movement for 24 hours. The family stated that the patient had been kicked in the abdomen by her four-year-old brother two days before but had complained only a little

at the time. The temperature was 99.6° F. and the pulse rate 96.

There was slight abdominal distention, tenderness and rigidity in the right lower quadrant, and mild rebound tenderness referred to the right lower quadrant. Leukocytes numbered 16,000 per cu. mm. of blood. The urine was normal.

Five hours later the local signs had increased. The provisional diagnosis was appendicitis or mesenteric adenitis. The abdomen was entered through a McBurney incision. The appendix and mesenteric glands were normal. A mass felt in the upper right quadrant was delivered into the wound and was observed to be a 7x4x1 cm. infarct of the omentum. It was resected and the abdomen closed. Convalescence was normal and the patient was discharged on January 21, 1949.

The pathologist's report was: "Extensive hemorrhage along the fascial planes and around small blood vessels. A single vessel shows thrombosis with partial recanalization."

CASE 6 (Reported through the courtesy of Dr. Ruth Fleming): A 15-year-old boy was admitted to St. Joseph's Hospital February 20, 1952, about eight hours after an automobile accident. About two hours before entry he had received sedation for severe pain at an emergency hospital and was semi-conscious on arrival, but could be roused. The temperature was 96.6° F., the pulse rate 112, and respirations 24 per minute. The blood pressure was 90 mm. of mercury systolic and 60 mm. diastolic.

The patient was pale, perspiring, and obviously in shock. There were large bruises over the right hip and the lower ribs on the right side. The only abnormality noted in neurological examination was that the pupils of both eyes were small and did not respond to light. The lungs were clear and expansion was equal. The abdomen was slightly distended but soft to palpation. No masses were felt. There was no audible peristalsis.

There were 4,500,000 erythrocytes per cu. mm. of blood and the hemoglobin value was 80 per cent. Leukocytes numbered 52,000 per cu. mm.—97 per cent polymorphonuclear cells. The cell volume was 33 per cent of the whole blood. Blood was visible in the urine.

The patient was given 500 cc. of whole blood as soon as typing and cross matching could be carried out. The pulse rate promptly decreased and the blood pressure increased. During the first two hours the patient vomited about 400 cc. of "coffee-ground" material.

Upon repeated abdominal examinations some rigidity of the right abdominal wall and tenderness to palpation were noted. The patient complained of abdominal pain, which was relieved by codeine. Abdominal peristalsis was demonstrated and no evidence of free air was observed in a plain film of the abdomen. There was no further vomiting. The tentative diagnosis was retroperitoneal hemorrhage.

The patient was permitted to take fluids by mouth on the second hospital day and food on the third. The abdominal pain gradually subsided and a mass was palpable in the right subcostal area. On the fifth hospital day, after two days in which there was no discomfort, steady pain again developed in the right side and it was necessary to give codeine for relief. The pain gradually diminished and the patient was permitted to sit up on the twelfth day. He soon became nauseated, however, and once more there was dull pain on the right side for a short time. Convalescence thereafter was rapid and uneventful. The patient was dismissed on the seventeenth day, and two months later was still well.

A record of erythrocyte determinations, hematocrit readings and transfusions of whole blood follows:

Date	Erythrocytes per cu. mm.	Cell Volume (per cent of whole blood)	Transfusions
Feb. 20, 1952	4,500,000	33	500 cc.
Feb. 21, 1952	3,600,000	33	500 cc.
Feb. 22, 1952	.....	34	.....
Feb. 23, 1952	2,870,000	27	500 cc.
Feb. 24, 1952	.....	39	.....
Feb. 25, 1952	.....	32.5	.....
Feb. 26, 1952	3,640,000	37	.....
Feb. 27, 1952	.....	40	.....
March 1, 1952	4,000,000	39	.....
March 3, 1952	3,600,000	36	.....
March 6, 1952	4,380,000	40	.....

CASE 7: The patient, a 30-year-old woman, was observed in consultation with Dr. L. Parry Douglass.

At about 1 p.m. the patient became aware of a dull pain in the epigastrium. It was localized and steady, with few remissions, and gradually increased in intensity. At 6 p.m. the pain, then moderately severe, was localized in both upper quadrants of the abdomen. Two hours later there was unbearable pain over the entire abdomen and radiating to the back. The patient took three glasses of baking soda and water, administered an enema, and then induced vomiting. This gave transient relief, but the pain returned suddenly with even greater intensity and the patient was admitted to St. Joseph's Hospital.

The patient said that menstruation was regular and normal and that the last period had ended five days previously. The temperature was 99.6° F., the pulse rate 92 and respirations 22 per minute. The blood pressure was 104 mm. of mercury systolic and 62 mm. diastolic.

There was diffuse generalized tenderness over the entire abdomen with moderate muscular guarding and exquisite rebound tenderness. The peristaltic sounds were normal to auscultation. No shifting dullness was elicited on percussion. Results of pelvic examination were normal. A plain film of the abdomen was reported to show a "moderate amount of gas in the large bowel and some slightly dilated loops of small bowel in the left flank, possibly due to an early ileus or obstruction." Erythrocytes numbered 4,100,000 per cu. mm. of blood. The hemoglobin value was 78 per cent. Leukocytes numbered 9,200 per cu. mm.—82 per cent neutrophils. The urine was normal.

The tentative diagnosis was hemoperitoneum due to rupture of hematoma, source undetermined.

The patient was given sufficient medication to control pain and ingestion of liquids was restricted. The next day the observations upon physical examination were essentially the same as before except for slight increase in abdominal distention. Since liquids were well tolerated by mouth, restriction was discontinued. On the third day the patient moved more freely in bed but would not turn on her side. The physical findings remained the same. Later in the day the patient complained of pain in the left shoulder.

Fluoroscopic examination on the fifth day showed some limitation of motion of the left dome of the diaphragm without elevation. There was a large amount of gas in the colon.

Throughout this time pronounced tenderness and rigidity of the abdomen persisted, and the pain in the left shoulder, while not as acute as when first noted, was still present. The peristaltic sounds of the abdomen were of normal pattern, and although there was slight distention the patient passed flatus and a loose stool. No abnormality was noted in repeated vaginal examinations. All symptoms and objective findings gradually subsided. As the patient improved,

tenderness and spasm lingered in the left side below the ribs. In a roentgen study with barium enema on the fourteenth hospital day, moderate spasm of the sigmoid colon was noted. Sigmoidoscopic examination was carried out and the mucosa was observed to be normal. Erythrocyte determinations after the first day were as follows: Second day, 4,500,000 per cu. mm.; third day, 3,720,000; fifth day, 3,990,000; fourteenth day, 4,700,000.

The patient was discharged from the hospital on the sixteenth day with slight residual tenderness in the left side which soon abated. There was no recurrence in eight months.

CASE 8 (Referred by Dr. Walter Kollman): A 55-year-old fireman was admitted to St. Joseph's Hospital with complaint of severe upper abdominal pain. He had been awakened about 4 a.m. by constant severe discomfort in the epigastrium which he attributed to indigestion induced by a heavy meal the evening before. He was nauseated but did not vomit. After the patient had sat up awhile rubbing his abdomen the pain gradually diminished and he was able to fall asleep. Two hours later he was again awakened by recurrence of pain more severe than before.

The temperature was 99° F., the pulse rate 84, and blood pressure 190 mm. of mercury systolic and 106 mm. diastolic. The erythrocyte content of the blood was 5,070,000 per cu. mm. and the hemoglobin value 110 per cent. Leukocytes numbered 17,300 per cu. mm.—92 per cent polymorphonuclear cells.

Upon examination of the abdomen (fifteen hours after onset of pain) moderate muscle rigidity and some distention were noted. There was quite pronounced diffuse tenderness to palpation, most evident in the epigastrium. Upon auscultation the peristaltic sounds were noted to be few and faint.

The pain seemed to have become somewhat colicky in character, and operation was advised upon a tentative diagnosis of mesenteric thrombosis. When the peritoneum was opened, approximately 500 cc. of dark red blood was evacuated. The small bowel was distended and inflamed. In careful examination of the full length of the bowel no evidence of obstruction was noted. The pancreas seemed slightly indurated but there was no evidence of fat necrosis. The mesentery of the bowel did not contain a hematoma and no source of bleeding was found. The abdomen was closed and the patient was returned to his room in fair condition with indwelling intestinal suction which continued for three days. The distention subsided and normal peristalsis returned. Convalescence was uneventful and the patient was discharged on the twelfth hospital day. He had no recurrence of symptoms.

CASE 9: A 29-year-old housewife entered St. Joseph's Hospital on January 2, 1949. She had been struck beneath the right costal margin during a New Year's Eve brawl. The blow was hard enough to "knock the wind out of me", but had no other immediate effect. About two hours after retiring, she was awakened by constant and gradually increasing pain in the region where the blow had landed. She became nauseated and vomited repeatedly without relief. Pain subsided to a dull ache the next day but recurred in greater severity on the morning of entry.

Erythrocytes numbered 3,010,000 per cu. mm. of blood, and the hemoglobin value was 63 per cent. There were 12,000 leukocytes per cu. mm.—91 per cent neutrophils. Results of urinalysis were within normal limits.

The only abnormality noted upon physical examination was pronounced diffuse tenderness in the upper right quadrant of the abdomen, without muscle spasm. The chest and abdomen were roentgenographically normal.

The tentative diagnosis was subperitoneal hemorrhage. Ingestion of fluids was discontinued and the fluid balance was maintained by parenteral injection. Typing and cross-matching of the patient's blood was carried out and the house staff was alerted to the possibility of sudden collapse and need for therapy to overcome shock.

Nausea and vomiting promptly ceased and pain gradually diminished. Three days after the patient was admitted, a tender mass which did not move with respiration could be palpated in the upper right quadrant of the abdomen. A soft diet was started on the fourth hospital day. Convalescence was uneventful and the patient was discharged January 17. When the patient was last examined, two months later, the mass was still palpable, but less definite. She was reported to have remained well.

Data on erythrocyte determinations and transfusions of whole blood follow:

Day	Erythrocytes per cu. mm.	Transfusions
Jan. 2	3,010,000	.....
Jan. 3	2,910,000	500 cc.
Jan. 5	3,020,000	500 cc.
Jan. 6	3,910,000	.....
Jan. 17	4,760,000	.....

CASE 10: A 46-year-old man slipped while working on a step ladder. As he fell a metal extension struck him in the abdomen on the left rectus muscle, causing severe immediate pain which diminished to a dull ache. He finished his work without difficulty but three hours later, after he had eaten dinner, the pain gradually increased in severity. It was constant in character and soon caused nausea and vomiting which gave no relief. The patient was admitted to St. Joseph's Hospital eight hours after injury. At the time of admittance the patient seemed apprehensive and obviously was in severe pain which prevented his remaining still. The temperature was 97.8° F., the pulse rate 52, respirations 18 per minute, and the blood pressure 122 mm. of mercury systolic, and 90 mm. diastolic.

The abdomen was soft to palpation, with localized tenderness to the left of the umbilicus. Contraction of the recti caused no change in the pain. Bowel sounds were normal.

No evidence of free air was observed in an x-ray film of the abdomen and the gas pattern appeared to be normal. The shadow of the right psoas was sharp and distinct but there was a bulging haziness in the lower half of the left psoas. The roentgenologist interpreted this as evidence of possible hemorrhage into the left psoas muscle. The tentative diagnosis was subperitoneal hemorrhage. All oral intake was stopped. Codeine, 0.06 gm., with sodium phenobarbital, was given intramuscularly. The pain was relieved, and eight hours later the patient was given fluid by mouth, starting with 1000 cc. of 5 per cent glucose in normal saline solution to restore fluid balance. A soft diet was instituted with six feedings a day. There was no recurrence of pain. The abdomen remained soft and flat and local tenderness gradually diminished. The patient was dismissed from the hospital on the fourth day and was discharged from further care, asymptomatic, two weeks later.

Laboratory data on examinations of the blood were as follows:

Day	Erythrocytes	Leukocytes	Hematocrit
Day of admittance (11 p.m.).....	5,410,000	23,500 (95% neutrophils)	.....
First morning....	5,000,000
afternoon..	4,690,000	20,000	38 mm.
Second	4,820,000
Third	4,760,000	47 mm.

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Shipment of "Cancer Diagnosis Kit" Enjoined

FOOD AND DRUG ADMINISTRATION has obtained a permanent injunction against the William Dunkler Laboratories, Chicago, to stop shipments of Dunkler's cancer diagnosis kit. Dr. Gordon Granger, FDA medical officer, commented: "The danger to public health of this scheme for cancer detection is emphasized by the fact that . . . tests showed negative results in 59 of 76 cases known to be malignant."—*From the A.M.A. Capitol Clinic.*

Moles, Melanomas and Epitheliomas in Children

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THE PURPOSE of this presentation is to briefly consider the practical management of pigmented nevi in childhood. Such a discussion must necessarily include the problem of juvenile melanomas. In addition, the occurrence of cutaneous malignancy in this age group will be briefly discussed.

First, as to a classification of so called pigmented nevi:

TYPES OF PIGMENTED NEVI

1. *Epithelial, intra-epidermal or acanthotic nevi* frequently occur as linear lesions with segmental or metameric distribution. They may also appear as verrucous, raised, solitary lesions. Usually they are present at birth, and while pigment may be present or absent, such a lesion is not important as a precursor of malignant melanoma. It may be the site of a prickle cell carcinoma in later life, however.

2. *Junction nevus* is a term applied to any pigmented lesion having active proliferating nevus cells at the dermo-epidermal junction. Most so-called pigmented moles in children either are of this type or have at one time had so-called junctional activity. Lund¹² as well as Montgomery and Stegmaier²⁶ in studies on pigmented moles in early childhood observed that such junctional changes occurred in all such lesions. Clinically the pure junction nevus is non-hairy, smooth, flat or macular and light brown, dark brown, blue or black. The commonest sites are the face, lower extremities and genitalia.

Junctional activity in association with definite nests, bands or strands of nevus cells in the cutis is not uncommon in this age group.

3. *Intradermal, intracutaneous, dermal or cutis nevus*. These synonymous terms are applied to pigmented nevi in which the nevus cells are confined to the dermis. Purely dermic nevi are uncommon in infancy and early childhood. The incidence increases in the prepubertal years. This is because the nevus cells in the cutis derive from the proliferation of nevus cells at the dermo-epidermal junction. Hence the cutis nevus represents a more adult or differentiated type of pigmented growth than the junction nevus from which it derives. Not infrequently some junctional activity is found in such lesions. However, true dermal nevus, a precursor of

• *The management of moles which occur in childhood is important from the standpoint of clinical diagnosis and treatment. Melanomas of both the malignant and juvenile types are sometimes mistaken for ordinary moles. Malignant epithelial tumors are rare in childhood as are congenital tumors. There is a possible relationship between congenital defects of various types and childhood neoplasms.*

malignant melanoma, is exceedingly rare. Clinically these lesions are usually soft to firm, brown, elevated, smooth or slightly papillomatous. They may or may not contain hairs.

4. *Blue nevus* is frequently mistaken for a malignant melanoma because it occurs as a blue to blue-black, non-hairy, firm, elevated, circumscribed nodule or tumor. Varying in size from 5 to 15 mm. in diameter, its surface is usually smooth. A presumptive clinical diagnosis is only possible when such a lesion has existed without change from early childhood. Simple excision is adequate therapy. The histologic structure is quite characteristic. Malignant degeneration is extraordinarily rare and (as far as the author could determine) has not been reported in childhood.

5. *Mixed, combined or compound nevus*. This term is usually applied to a lesion which has histologic features of both the dermal nevus and the junction nevus. However, it also can be applied to the rare combination of a deep blue nevus and an overlying dermal nevus. The author does not recall ever having seen an epithelial nevus combined with a junction, dermal or blue nevus, although Montgomery¹⁴ stated that "linear nevi with or without pigment may contain nevus cells."

SPONTANEOUS DISAPPEARANCE OF PIGMENTED NEVI

For two reasons the author takes exception to the statement that pigmented nevi never disappear spontaneously.¹³ First, unpublished personal observations have led to certainty that the phenomenon of leukoderma centrifugum acquisitum of Sutton represents spontaneous cure of an ordinary pigmented mole.

Second, in microscopic study of all soft, pedunculated, flesh-colored, fibromatous lesions removed

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from adults, it was noted that a surprising number contained greater or lesser numbers of nevus cells with variable amounts of fibrous connective tissue. Pigment was absent. Rarely, small foci of junctional activity were present. However, all gradations as to the numbers of nevus cells in the dermis were observed. It is hard to avoid the conclusion that the end stage of some pigmented nevi is fibrosis.

JUVENILE MELANOMA

There is a rare type of melanoma occurring in childhood which deserves special consideration. Great credit must be given to Spitz²⁵ who collected data on a group of 13 such cases and established the disorder as a definite clinical and pathologic entity.

Clinically the condition is a solitary lesion seldom larger than 1 cm. in diameter. This lesion is not infrequently a firm, flesh-colored or slightly pink nodule definitely elevated above the surface of the skin. It may, however, be brown or black, but is probably never hairy. In only one of the four cases of which the author has personal knowledge was there evidence of pigmentary disturbance—three separate and distinct brown pinhead-sized macules, one of them at the very edge of the lesion and the other two in apparently normal skin a millimeter distant from the visible edge of the nodule.

The histologic structure of lesions of this kind is such as would occasion alarm if the patient were an adult. There is pronounced cellular activity at the dermo-epidermal junction. The proliferating cells, which vary widely in size, produce melanin. They are larger than the cells of the epidermis and may be fusiform, round or polyhedral. Quite characteristic are large bizarre mononuclear or multinuclear giant cells.

TREATMENT OF MOLES

Slaughter²² made the following statement: "There is considerable mythology and misunderstanding about the treatment of moles. There is much popular fear that disturbing a mole in any way may be dangerous. In my personal experience and in the literature, there is no authenticated instance of a benign neuronevus becoming malignant after incomplete removal with the electric needle, cautery or excision. Close scrutiny of such supposed occurrences will almost invariably show that the mole was malignant in the first place and usually treatment was instituted because of the changes incident to unrecognized malignant transformation. Dermatologists have removed thousands and thousands of moles with acid, carbon dioxide snow, electrocautery and so forth, without untoward occurrence. Removal of

moles on the face for cosmetic reasons by these methods would seem to be perfectly safe."

Slaughter went on to point out that there are two disadvantages to such a procedure: (1) There is no tissue for microscopic section and (2) there is usually incomplete destruction of such a lesion. These objections, however, can be overcome by Becker's method of removing the upper two-thirds of the lesion with scissors for histologic study, then destroying the remainder of the lesion by electro-desiccation. An excellent cosmetic result is usually obtained.

MALIGNANT MELANOMAS IN CHILDHOOD

Spitz²⁴ disputed Montgomery's¹⁴ statement that malignant melanoma is more frequent among children than other types of epithelioma. Nevertheless, malignant melanomas do occur in childhood and various observers have reported one or more cases.^{4, 11, 14, 24} It is to be noted that malignant transformation may take place in so-called hairy moles¹⁴ and especially in the giant hairy nevi sometimes called "bathing trunk nevi."

CARCINOMA OF THE SKIN IN CHILDHOOD

The most important condition predisposing to carcinoma of the skin in childhood is xeroderma pigmentosum.³ This condition frequently occurs in children whose parents are blood relatives. The manner of inheritance has been studied extensively. At one time consideration was given to the possibility of partial sex linkage with transmission of the disease through the X or Y chromosome. Results of recent genetic studies, however, seemed to indicate that the disease is transmitted by simple recessive genes.

From a dermatologic standpoint the condition starts early in life and on areas exposed to sunlight, to which there is an abnormal sensitivity. Clinical features are pronounced freckling or pigmentation with erythema and telangiectasia followed by the development of scaling hyperkeratotic lesions along with atrophic depigmented areas and considerable conjunctival hyperemia. In the course of a few years carcinoma develops, particularly on the face or conjunctiva. These cancerous lesions are usually multiple and may be of the basal cell type, in which case the lesion is often pigmented. Frequently the lesion is prickle cell carcinoma. The occurrence or development of malignant melanoma and fibrosarcoma, while uncommon, has been reported. The condition is exceedingly serious and usually leads to early death.

There are clinical signs and familiar factors by which it is possible to determine that a given person

probably is a carrier of the recessive genes involved in inheritance of this disease.¹⁵ Heavy freckling in one or both of the parents or in brothers or sisters of a patient with xeroderma pigmentosum is extremely strong evidence that any of them, if not actually having a mild form of the disease,¹ is a carrier of the recessive gene.

Aside from xeroderma pigmentosum, there is another group of malignant epithelial growths of a kind that arise in a preexisting nevus. They are not, however, to be confused with pigmented moles. A nevus of this type is usually a unilateral,¹⁸ sometimes linear birthmark. Its histologic structure may be epidermal and acanthotic, or it may be made up of sebaceous cells, as is the nevus sebaceus of Jadassohn.¹⁹ Sometimes the nevus, like nevus syringocystadenoma papilliferus, is composed of sweat gland cells.

The carcinomas arising from such nevi are usually of the malignant prickle cell variety, but basal cell epitheliomas have been reported. Actually such malignant changes for the most part occur in adult life, but may occur in childhood. The author observed one case of prickle cell epitheliomas which developed on a sebaceous nevus in a girl eight years of age.

BASAL CELL EPITHELIOMA

There is a very rare group of multiple congenital basal cell epitheliomas, examples of which have been reported by Nomland¹⁷ and Nisbet.¹⁶ The lesion in the case reported by Scharnagel and Pack²⁰ probably belongs in this group. In early life these lesions are indistinguishable from flat pigmented nevi.

CALCIFYING EPITHELIOMA (MALHERBE)

Calcifying epithelioma (Malherbe) occurs in children most often on the face, neck and upper extremities. It is a solitary, subcutaneous, hard, deep-seated tumor from 1 to 3 cm. in diameter covered by normal skin. The diagnosis must be made on the basis of the histologic structure, which is said to be characteristic. Nevertheless it is only fair to state that some investigators²⁷ hold to the belief that such lesions are calcified epidermal cysts, a view with which the author is inclined to agree.

CONGENITAL TUMORS

A wide variety of congenital tumors involving the skin or mucous membranes have been reported. These are of several types. In some instances the condition is inherited, as in Recklinghausen's neurofibromatosis.²¹ In other cases benign congenital tumors of the gum have occurred.^{19, 23} In still another group, congenital malignant tumors of the

thymus with extensive cutaneous metastases have been reported.^{2,8, 28}

Finally, a rare occurrence is the birth of a baby with malignant tumor resulting from the fact the mother had generalized metastatic carcinomatosis or melanomatosis during pregnancy and the disease was transmitted via the placenta to the fetus.^{7, 9}

CONGENITAL DEFECTS

The possible relationship between congenital defects of various types and various neoplasms occurring in childhood has been discussed by Dargeon.^{5, 6} Congenital malformations such as supernumerary digits, cataracts, hemangiomas and developmental abnormalities of the heart have been associated with such neoplasms as Wilms' tumor, rhabdomyosarcoma, lymphosarcoma and astrocytoma of the cerebellum.

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A Curb on Excessive Fees

HARTFORD (CONNECTICUT) COUNTY'S 867-member medical society recently adopted a new by-law which is aimed at curbing doctors who try to saddle patients with exorbitant charges.

The *Hartford Times*, reporting the society's action, said:

"The move is another step by the public relations-conscious organization to strengthen the position of the profession with the public by imposing shackles on any who might tear down public confidence through gross overcharging. It is believed to be the first of the state's eight county medical societies to give its officials such broad powers."

The newspaper said that the county society amended its by-laws to give the committee on medical ethics and deportment a strong weapon to "police" its ranks in matters of overcharging.

One provision of the by-law is that the committee can call in three impartial doctors who are specialists in the field involved and get their advice on the reasonableness of fees for service given.—*From the A.M.A. Secretary's Letter.*

Early Diagnosis of Malignant Melanoma of the Skin

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PRIMARY MALIGNANT MELANOMA occurs most frequently in the skin and adjoining mucous membranes, next most frequently in the eye and least frequently in the meninges. Primary occurrence elsewhere is very doubtful, and in any case is conceded to be extremely rare. Malignant melanoma constitutes approximately 5 per cent of all malignant lesions of the skin.⁶ In the skin of the lower extremities, however, more than 50 per cent of all malignant tumors are melanomas.^{3, 9} Because of this relative frequency and the high degree of malignancy and poor prognosis, malignant melanoma is a continuing challenge.

The authors recently studied 454 cases of clinically diagnosed malignant melanoma to determine which clinical and histopathological factors might be used in an earlier and more certain diagnosis. This presentation summarizes the clinical factors which appeared, in study of these cases and of the extensive literature, to be of value in diagnosis. The statistical and histopathological findings from the study will be reported elsewhere.²

Most observers agree that the melanoblast, from which the malignant melanoma develops, is found only in the skin, the mucocutaneous junctions, the conjunctiva, iris, retina and choroid of the eye and the leptomeninges. It is now quite certain that most, if not all, malignant melanomas develop from pre-existing lesions. At least as far back as 1857 pigmented nevi were definitely pointed out as precursors of malignant melanomas.¹⁰

Suggestions were made from time to time as to which type of mole, nevus or birthmark was most likely to become malignant, but these suggestions were nearly always wrong. Not until quite recently has it become clear which type of nevus most frequently gives rise to malignant melanoma.

PRECURSOR LESIONS

The precursor lesions of malignant melanomas of the skin are, in order of importance, the junction nevus, the precancerous melanosis and lentigo maligna, the junction compound nevus and the blue nevus. It is evident that the recognition and proper evaluation of these antecedent lesions are of para-

• About five per cent of all malignant lesions of the skin are malignant melanomas. The poor prognosis associated with this malignant lesion emphasizes the importance of early diagnosis. A large proportion of malignant melanomas arise in preexisting lesions such as junction nevi, precancerous melanoses and, much more rarely, blue nevi. Early malignant changes in these precursor lesions include increasing pigmentation, enlargement, thickening, crusting, bleeding, ulceration, tumor formation, and development of satellite lesions.

Many pigmented, and some non-pigmented, lesions of the skin must be differentiated from malignant melanoma. Since even with radical surgical treatment the prognosis of malignant melanoma is poor, junction nevi which are subject to continual trauma or have signs of probable malignant degeneration should be prophylactically excised.

mount importance in arriving at an early diagnosis and prompt start of prophylactic treatment of malignant melanoma.

The junction nevus, so called because nevus cells are found at the junction of the dermis and epidermis, was named by Sattenstein, the name being later popularized and clinically interpreted by Traub and Keil.¹² The most common pigmented nevus, at least in the first three decades of life, is a light brown to jet black macular lesion, sometimes slightly elevated in the center. The surface is nearly always smooth, occasionally granular, and is free of coarse hair. The size varies from less than 1 mm. to more than 1 cm., but nearly all junction nevi are between 2 and 5 mm. in size. They may be found anywhere on the skin, including the mucocutaneous areas, and occur in all races. The average number found in a patient is said to be about twenty. The authors conclude from their studies that this estimate is probably too low, having actually counted as many as 640 clinically typical junction nevi in one adult patient.

Lentigo appears to be an early form of junction nevus, always smooth and macular, often occurring in great numbers, and microscopically identical with the junction nevus except that the nevus cells do not tend to occur in clusters or theques and are all intra-

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epidermal. Lentigo apparently has less tendency to become malignant than has the typical junction nevus.

Precancerous melanosis is much rarer than the junction nevus but is much more likely to become malignant. Precancerous melanosis develops in older persons, usually on the face, as a light to dark brown spot which slowly enlarges peripherally until, for instance, it may cover a large part of the cheek. Satellite spots may appear and may become confluent with the first lesion. Malignant change usually does not occur until the melanosis has been present for several years; such change, commonly found at the periphery, is indicated by palpable infiltration and the presence of nodules. The term "lentigo maligna," which is used by some writers as a synonym for precancerous melanosis, has been applied in the past to several different conditions. The authors apply it to a melanoma originating in a lentigo, forming a superficial, intra-epidermal malignant melanoma, usually of slow growth and late metastasis.

The junction compound nevus is microscopically a combination of a junction nevus and a dermal nevus. It is an elevated, firm lesion (rarely soft), usually nodular, rounded or dome-shaped, with a smooth or slightly verrucous surface, often containing dark coarse hairs. A junction compound nevus always has areas of pigmentation. The dermal nevus has nevus cells only in the dermis, while the compound junction nevus has nevus cells also in the epidermis or at the epidermal-dermal junction. The development of a malignant melanoma from a compound junction nevus, is much rarer than from a junction nevus, and probably occurs only when such a lesion is subject to repeated trauma. No cases are known in which it was clearly established that a malignant melanoma arose from a non-pigmented, nodular, purely dermal nevus.

The blue nevus contains spindle-shaped melanoblasts (which are believed to be of mesodermal origin in this lesion), located in the dermis in small or large groups. It is a pale blue to dark blue macular to nodular lesion, usually deep-seated, most commonly seen on the hands, feet, face or buttocks. It is usually slightly larger than a junction nevus of average size. Although a blue nevus rarely becomes malignant, the authors have recently observed a patient in whom a blue nevus of the sole of the foot became malignant and metastasized to the regional inguinal lymph nodes.¹

EARLY MALIGNANT CHANGES

The earliest signs of the development of a malignant melanoma are usually the changes seen in a junction nevus when it undergoes malignant degeneration. These changes do not always occur in the

same order, but most frequently there is first noted a darkening of color in the nevus, then an increase in size or a thickening or elevation of the lesion. Further changes may include crusting, ulceration, bleeding, or the development of a nodular tumor. In other cases there is a spilling of pigment into the adjacent skin, or small satellite lesions may appear close to the original nevus. Still later more distant metastases in the skin or regional lymph nodes may develop, or distant visceral metastases may be noted first. Clinical evidence of malignancy in some junction nevi which have already changed into melanomas is so scant—perhaps only a slight increase in pigmentation and barely palpable infiltration—that they are overlooked when search is made for a primary lesion after metastases have become clinically evident.

In a few cases of malignant melanoma of the skin no precursor lesion is clinically evident. The authors have observed at least two such occurrences in patients who had been under observation for other skin conditions, and in whom amelanotic melanomas developed on the face without grossly visible antecedent lesions. In such instances small groups of nevus cells may be present in the epidermis which are not detectable to the naked eye. These may give rise to a malignant melanoma as readily as a larger aggregate of the same cells. The authors have recently seen a section from a primary melanoma of the foot which was less than 2 mm. in diameter and light brown in color but had already given rise to regional lymph node metastases. The malignant change microscopically evident in the antecedent junction nevus was limited to a single rete peg.

In those cases in which no precursor lesions have been noticed, the malignant melanoma may first appear as a pigmented macular lesion which becomes infiltrated, or as a pigmented or non-pigmented nodule or tumor.

After a precursor lesion begins to undergo malignant degeneration, the various changes indicative of malignancy may follow each other in rapid succession, so that within a period of less than two months a fully developed melanotic tumor with metastases may be present. In other cases, particularly those arising in precancerous melanosis or in lentigo, successive changes may be very slow, and metastases from such a melanoma may not occur for years.

How soon metastases may occur after visible changes first appear in a precursor lesion is illustrated by the case of a patient who had had a flat pigmented nevus on the left side of the abdomen all his life. Three weeks before the authors' examination there seemed to be some increase in pigmentation

and a slight enlargement of the nevus. The lesion was widely excised for biopsy, and then radical excision of a large part of the skin of the abdomen was done by a competent general surgeon. No lymph nodes were palpable at that time, and because of uncertainty as to where regional metastasis might have occurred, no groin or axillary dissections were done. There was no local recurrence of the disease but metastases developed almost simultaneously in the contralateral axillary lymph nodes and in the liver, and the patient died of general metastases within two years of the time he first noticed changes in the junction nevus, despite the fact that adequate excision of the primary tumor was done only three weeks after the initial changes became apparent.

Malignant melanoma may spread in several ways. There may be local extension of the disease, sometimes to a pronounced degree. There may be metastases by way of the lymphatic system to adjacent skin areas and to the regional lymph nodes, from which the dissemination may continue through the lymphatic system or through the bloodstream. Metastases may also occur directly from the primary lesion via the bloodstream, causing early widespread metastases. Probably no other tumor tends to metastasize as early and as widely as malignant melanoma: in some cases almost every organ and type of tissue in the body is involved. The earliest symptoms of malignant melanoma may be those arising from the internal metastases, such as to the brain, lung or pancreas, the primary lesion having been unnoticed. On the other hand, after a primary malignant melanoma has been removed the metastatic lesions may not be clinically evident for decades.⁵ A primary melanoma may be without visible pigment (a so-called amelanotic melanoma), and metastases from a pigmented malignant melanoma may also be without pigmentation, although microscopically some areas of melanin deposit can be seen in most of these amelanotic lesions.

Although malignant melanoma may arise at any age, the incidence steadily increases with advancing years, and the prognosis is far better before puberty than in later life because there is less tendency to metastasize.¹¹ apparently owing to endocrine factors which have not yet been specifically determined. These endocrine factors seem to have an opposite effect in pregnancy, where increased pigmentation of nevi is commonly noted, and where there seems to be an increased susceptibility toward malignant degeneration of junction nevi, with early rapid spread of metastases and unusually poor prognosis.

There is no significant difference in the incidence of malignant melanomas in males and females. No race seems to be exempt from this tumor, although

there is a higher incidence of melanoma in the light-skinned races. The incidence in Negroes is about one-third that in Caucasians.^{4, 7} Most melanomas occur from the fifth to the eighth decade of life, the peak being reached near the age of sixty. The most common site of malignant melanoma is the lower extremities, next the head and neck, and next the upper extremities. The number found on the feet far exceed the number found on any other comparable area. Melanomas are often diagnosed late in the anorectal area, the vulva and vagina, the mouth, and the mucous membrane of the nose.

Melanin may be found in the urine of patients with malignant melanomas if the elaboration of melanin is high. Sometimes this is of prognostic value. If the primary tumor has been adequately excised and no metastases can be demonstrated, and yet there is a definite steady elimination of melanin via the kidneys, visceral metastasis has occurred. Occasionally melanin production is so marked that general pigmentation or melanosis of the skin and mucous membranes takes place. Melanin phagocytized by the regional lymph nodes from a malignant melanoma has at times led to a mistaken diagnosis of metastatic melanoma when actually no malignant cells were present.

DIFFERENTIAL DIAGNOSIS

There are certain lesions of the skin with which malignant melanoma is commonly confused. It is beyond the scope of this presentation to list all such lesions, but a few are common and important. Probably all forms of pigmented lesion should be considered in the differential diagnosis of malignant melanoma. The most common and important of these is, as previously explained, the flat pigmented junction nevus. At times it is clinically impossible to be absolutely certain of the benign or malignant character of a particular lesion. In such cases surgical removal and microscopic study are necessary, and by this means it is possible to determine, in practically every instance, whether a lesion of this type is still a nevus or has changed to a malignant melanoma.

Other pigmented lesions which are confused with malignant melanoma are compound junction nevi, blue nevi, seborrheic and senile keratoses, pigmented basal cell epitheliomas, pigmented or hemorrhagic sarcomas, subepidermal fibromas, hemangiomas, hematomas, accidental tattoo marks, plantar warts and fixed drug eruptions. Nearly all of these can be quite easily differentiated clinically if the lesion is examined thoroughly, although biopsy may be necessary to diagnosis of pigmented basal cell epithelioma, blue nevus, hemangioma, and hematoma, particularly if the last-named is subungual.

Of the non-pigmented lesions which need to be differentiated the pyogenic granuloma is the most important. It usually has a pink to light red color, and a dark crust from previous hemorrhage may increase the resemblance to melanoma. The lips, the nail folds, and the feet are the sites of predilection for this lesion, but it may appear anywhere, particularly on the face. Usually it appears after trauma or infection, grows rapidly (in days instead of weeks as compared with the melanoma), and bleeds upon slight trauma. Although clinically this lesion can usually be differentiated quite readily, in many cases microscopic examination is necessary to make the diagnosis final.

A non-pigmented malignant tumor, particularly if it is fungating, may be confused with amelanotic melanoma. Papillary or fungating squamous cell carcinoma, especially if it appears on the feet, may be difficult to differentiate clinically. Many non-pigmented melanomas have been mistaken for squamous cell carcinoma, even microscopically, until the metastases clearly revealed the true nature of the tumor.

PREVENTIVE TREATMENT

Authors who have studied large series of patients treated for malignant melanoma differ greatly in their report of the mortality rates and life expectancy in these patients. Pack, Perzig and Scharnagel⁸ reported an over-all five-year salvage rate of 9.7 per cent and a 17.7 per cent five-year salvage rate in surgical removal of localized melanomas. In selected cases with very radical surgery such as hemipelvectomy and thoracoscapular amputation, a higher salvage rate can probably be attained. It seems clear, however, that even with the best of treatment and under the most favorable circumstances the prognosis of malignant melanoma in adults is poor. Prophylactic treatment, therefore, becomes important. Since most malignant melanomas develop from junction nevi, the intelligent management of these is an essential part of such preventive treatment.

In the cases observed by the authors, as in all other reported series in which the history of trauma was given consideration, irritation and injury have been suspected to be a frequent initiating cause of malignant degeneration in pigmented nevi. Avoidance of trauma to pigmented nevi, particularly of the junction variety, becomes the first consideration in the preventive treatment of malignant melanoma. Patients should be instructed that picking and scratching pigmented moles is dangerous. Junction nevi which are situated where they must unavoidably be subject to friction or other chronic irritation should be excised. Such locations of chronic traumatization are the feet, the waistline, the brassiere area,

the fingers and palms, and the neck and beard area in men. Perhaps the shoulders and scapular area should also be included. Junction nevi on the genitalia should also be excised prophylactically. Any junction nevus which has any of the signs of malignant degeneration previously mentioned should be excised with a good margin for microscopic study. Although it is certainly possible to destroy a junction nevus by various methods, including electrocoagulation, all methods except adequate surgical excision should be condemned. Only with surgical excision is there absolute certainty that the lesion has been completely eradicated, and only by this method is a specimen obtained for histopathologic study. A junction nevus or malignant melanoma may be excised by cautery, but the better cosmetic results and the preservation of a more suitable biopsy specimen make cold dissection preferable.

The treatment of malignant melanoma at present is purely surgical. If the tumor is removed before puberty or is one which developed in precancerous melanosis, local excision is usually sufficient. Radiation treatment has not proved to be adequate for either cure or palliation. The most important single factor in the surgical management of a patient with malignant melanoma is early operation, for which an early diagnosis is a prerequisite.

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Dissimilar Allergic Disease in Identical Twins

A Study of Psychosomatic Aspects

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THE CLINICAL SYNDROME of bronchial asthma is the result of pathophysiologic disturbances in the bronchopulmonary system—edema, hypersecretion, and constriction of smooth muscle. The major etiologic factor is assumed to be an antigen-antibody response; that is, a sensitive subject is exposed to an antigenic material and the lungs are the site of an allergic reaction. The cause-effect relationship is not always so clear-cut in individual patients. Exposure to a known antigen may result in clinical asthma under one set of circumstances, but not under another. It may be impossible to link clinical asthma with seasonal incidence of pollen, ingestion of certain foods, or a particular place of residence. Consequently, in recent years many workers have sought to elucidate other factors which, in a susceptible person and in certain circumstances, might combine to produce the clinical syndrome of asthma.

Emotional stress is one such factor which, in combination with a physiologic predisposition, may precipitate an allergic reaction. This association of emotional stress and precipitation of allergic reaction has been demonstrated in the laboratory by Holmes,^{10, 11, 12} Wolf and co-workers,¹⁹ Graham,⁸ and Treuting¹⁸ and has been commented on by many clinical observers.^{1, 3, 5, 7, 13, 15} It should be emphasized, however, that emotional stress *per se* is not the sole causative agent; it is only one of many trigger mechanisms which may set off an allergic reaction in a predisposed person.

Allergic diathesis is thought to be genetically determined. The distribution of genetic predisposition throughout the population, like that of other biologic phenomena, probably occurs in a "bell-shaped" curve, with persons who have a great predisposition to allergic reaction under the slightest stress at one end of the curve and persons who will probably never have allergic disease at the other. Predisposition cannot be measured; development of clinical allergic disease is the only conclusive evidence of its existence. For example, many persons in whom there is no clinical evidence of allergy have positive reac-

• *Identical twins with bronchial asthma were studied. One had the first attack of the disease in late adolescence, the other not until he was adult.*

Both were demonstrated by immunologic means to be sensitive to house dust and certain foods. Yet, of itself, the factor of exposure to a known allergen seemed not enough to precipitate clinical allergic reaction in either of them.

It is believed that emotional stress is accompanied by physiologic changes which facilitate increased reactions to antigenic agents that in normal circumstances would not cause clinical disease.

The twins were widely different with regard to emotional development and in their reaction to situations of stress. In both of them allergic manifestations were associated with periods of emotional conflict.

The dissimilar clinical manifestations of allergy in these identical twins may be explained by differences in personality and therefore in reactions to stress situations.

tion to skin tests.¹⁴ It may be postulated that later, under the proper circumstances, allergic disease might develop in them.¹ It has been observed that persons with a family history of frequent, severe allergic disease (strong genetic predisposition) tend to have clinical manifestation of allergy early in life. Apparently a specific sensitivity is not inherited, since the presence of circulating antibodies in newborn infants has never been conclusively demonstrated.²

The study of clinical evidence of allergy in identical twins should be of interest, since such twins have identical genetic endowments. There have been few such studies, owing to the difficulty of collecting the necessary clinical data.^{4, 17} As a matter of fact, the entire problem of genetic transmission in allergic susceptibility is not well defined.¹⁶ If identical twins have clinical manifestations of allergy which differ in time of onset, severity, and reaction pattern, it may be assumed that, since their genetic pattern is

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identical, other factors must modify the organism's response.

It is probable that emotional stress is one of the many factors which modify the organism's response and cause the differences between clinical manifestations in identical twins.

The authors have had opportunity to study a pair of young male twins, A and B, who fulfill the inferential criteria of identity. Unfortunately, complete proof is lacking; the twins were born at home and the placenta was not examined at the time of birth.

A and B are 26 years of age. A has had perennial allergic rhinitis since early childhood and intermittent bronchial asthma since the age of 17 years. B has had sporadic allergic rhinitis since the age of 9 years and intermittent bronchial asthma since he was 24 years old.

The following members of the family are known to have had asthma: Paternal grandmother and her family, maternal aunt, maternal grandfather, and the two-year-old daughter of B. The three-year-old son of A has mild atopic eczema.

A had a short episode of "croup" at the age of 6 years; B had one episode of hives at the age of 5 or 6 years and "chest trouble" for several months at the age of 9 years. A has had perennial allergic rhinitis since early childhood; in B's case, allergic rhinitis began later and has not been as frequent or severe. A had edema and itching of the eyes, following a first and only injection of penicillin when he was 21 years old. A has also had several episodes of conjunctivitis since the age of 21 years. A had edema of the lips after eating crab at the age of 25 years. Subsequently, he ate crab, but had no allergic reactions. B had conjunctivitis, which was diagnosed as chronic non-specific keratoconjunctivitis and which responded to local application of cortisone, when he was 26 years old. Both twins have had frequent canker sores since childhood.

On physical examination, A was found to be slightly heavier than B. The nasal mucosa of both twins was slightly edematous and pale, and a thin watery discharge was apparent. Upon examination of the lungs of both patients, musical rhonchi and expiratory wheezing were heard. Early emphysematous changes were noted in A.

Numerous eosinophils were observed in stained specimens of nasal and bronchial secretions from each twin.

Both A and B had strong positive reactions to scratch tests with house dust. Neither had reactions to either scratch or intradermal tests with other miscellaneous inhalants, and there was no reaction to scratch tests with various pollens of trees, grasses and weeds. A had positive reactions to scratch tests with fresh frozen crab and shrimp, as well as to extracts of crab and shrimp, but results of all other

scratch and intradermal tests with foods were negative. B had positive reactions to scratch tests with fresh frozen chicken, anchovy, cod, and sole; but he did not have reactions to scratch and intradermal tests with extracts of these and other foods.

Factors indicating the subjects were identical twins were:

1. The blood groups were identical: O, Rh₀, Rh₁, Rh", Hr', Hr", and MN positive.

2. Great similarity in bony structure, including dentition, as determined by x-ray examination.

3. Somatotyping performed by an independent observer strongly supported true identity.

4. Fingerprints were compatible with identity.

Both parents and one older sister, aged 37 years, are living. The father has had myocardial infarction and has occlusive vascular disease. The sister has diabetes.

The father is a successful businessman, active and extroverted, who drinks and smokes heavily. He was described by the twins as a "good guy, but with little time for the family." The mother has a rather dominant personality, is of rigid demeanor, has a strict religious and moral code, is demanding of husband and children, stressing obedience, and has a great desire to achieve social and financial standing. Despite long-standing marital discord, there has been no formal separation, since both parents are satisfied to go their separate ways. The twins respect and admire their sister, although because of the difference in ages their relationship with her is not close.

A is 15 minutes older than B, and both twins have always felt A was the parents' favorite. A admires and respects his father, wants to please and emulate him but has been somewhat passive in their relationships. The father treats A as though he were still a young boy. Although A respects his mother he has never felt the same affection toward her that he feels toward his father.

B apparently likes his father, but is no more than tolerant of what he regards as his father's weaknesses (for example, "little time for the family"). It is B's opinion that his parents' success is owing to the mother's domination, perseverance and drive. He also said that his mother is the stronger person. As a child, although he resented her demands and his need to comply with her wishes, he felt closer to her than to his father. He finds difficulty, however, in verbally expressing any feeling of true affection for her. It appears that B has always felt rejected by both parents and has reacted with hostility and strong efforts to gain independence. He feels that his mother made more demands on him than on A and that A in some way could "get around" her.

As children, the twins were both aware of their

rivalry. A was always a little larger physically and more popular in school, but B was the better athlete and a better student. A believes he had more natural athletic ability but did not try as hard as B did. During their senior year in high school when they were 17 years old, A had his first attack of asthma, which lasted three months. At the time he was temporarily away from home and working part-time.

After finishing high school, the twins joined different branches of the armed services. A had no attacks of asthma (allergic rhinitis?) while in the service and felt he was successful in his service career. Apparently he liked the idea of separation from his parents. While A was in the service, he married a girl two years older than he. The marriage has been happy. The couple has two sons, 6 and 3 years old. The youngest has very mild atopic eczema.

B did not like the service and was rather unhappy, but had good health. Soon after he was discharged, B married a girl three years younger than he. They have three daughters, aged 4, 2, and 1 year. The two-year-old daughter has had several attacks of wheezing respiration. B's wife is not of his religious faith, which apparently was and is disturbing to his mother. B and his wife disagree about religion and the religious education of the children. In religion, as in other areas, B has a rather intellectualized approach and has "his own concepts of religion." Apparently B does not like his wife's parents and prefers to have little contact with them. In spite of these problems, the marriage seems stable.

After being discharged from the service at the age of 20 years, A returned to school and was free of asthma until a severe attack developed the week before final examinations and persisted until a week after examinations. He began professional school one year later, and again asthmatic attacks occurred before and continued through examinations. He withdrew from school for one year because of asthma and conjunctivitis. During that year, he was free of asthma, although he lived in the same home. Upon resuming schooling, he had asthma before and during every final examination. Yet he had an admirable academic record. Since he has been practicing his profession, he has had attacks during periods when he was under pressure to "produce and succeed." A believes that tenseness, nervousness, and being under pressure are the major precipitating factors.

B also reentered college after being discharged from the service and at about the time of his marriage. He floundered for two or three years, not knowing what career to pursue. He tended to follow the lead of A in choosing a course of study and finally decided to follow the same profession. At the age of 24 years, he entered professional school and moved to a new locality. One year later, after he had lived in

the new locality for eight or more months, he moved to a new home in the same town. Soon afterward he had his first attack of asthma. Subsequently he moved to another house in the same block, but asthmatic attacks persisted. The following summer he worked in an area about 25 miles from his home and returned home every night. During this period he was free of asthma. B's attacks of asthma apparently have never been as severe as A's and are not precipitated by the stress of examinations. B associates attacks with feelings of guilt about not working or studying. He has a need to work hard and is reluctant to accept help from his family.

In summary, A has a great need to succeed in order to please other people. His whole life is directed toward achieving success so that he will be acclaimed by his family and friends. Every move seems to be calculated on the basis of what people will think about him. It may be that he is continually striving to maintain his favored position in reference to his twin brother. In any event, his overt personality is such that he is socially acceptable: he is pleasant, ingratiating, and makes an effort to have people like him. It is obvious, however, that when he is faced with a situation in which he must prove his ability to others—in tests, for example—the tension is so great that it precipitates an attack of asthma.

On the other hand, B seems to have a different attitude. It appears that he responded to A's favored position and his mother's demands by reacting with open hostility and denial of dependence. However, there is some identification with the mother, in that he is compulsive and rigid in his beliefs. In adult life he has tended to intellectualize all his problems and to distrust emotions. Once he is certain of the correctness of his ideas, he is willing to argue with anyone. He may even go out of his way to provoke an intellectual debate, thus providing a release for hostility. He is conscious of his rivalry with A and is continually trying to outdo him. Because of his somewhat rigid and combative exterior, he is not as socially acceptable as A and, it seems probable, not as well liked. Since his asthma was later in onset and not as severe, however, it may be assumed that he is more effective in handling his inner tensions.

Thorough psychological testing of the twins has been carried out by an independent observer. It is of interest that their intelligence quotient scores were very close. In general, the psychologist's impression coincided with the clinical formulation.

Because of the family history, it is assumed that these twins have a strong genetic allergic diathesis. Consequently their tissues respond to certain stimuli by the development of edema, hypersecretion, and smooth muscle spasm—that is, clinical allergic disease. The twins were demonstrated to have immuno-

logic allergy—the capacity to react to certain agents—as well as clinical allergic disease. However, it is known that clinical allergic disease may occur in the absence of demonstrable immunologic allergy—that is, factors other than antigen-antibody reactions may produce the pathophysiologic response defined as clinical allergic disease.^{8-12, 13, 19} It has been shown that emotional stress may be accompanied by vascular changes that are identical with those seen in immunologic allergy.^{8-12, 19} These vascular changes, namely, decreased constrictor tone of arterioles and capillaries, accompanied by increased permeability, are thought to be due to the liberation of acetylcholine at vasomotor nerve endings. Holmes¹⁰ demonstrated that such vascular phenomena can be produced in the nose, following interruption of sympathetic vasoconstrictor nerves by injection of procaine into the stellate ganglion.

It is probable that both immunologic allergy and non-allergic vascular phenomena are of importance in producing clinical allergic reactions in a given person. At one time the immunologic phase may predominate, while at another time non-allergic vascular reactions may be of primary importance. Holmes¹⁰ reported that the severity of clinical allergic response following exposure to an antigen may be greatly modified by the preexisting vascular status of the tissues involved. This may be the physiologic explanation for the clinical observation that a given subject may have clinical allergic response on exposure to a known antigen under one set of circumstances, and at other times have no clinical response to the same antigen. The thesis that changes in autonomic innervation may modify allergic phenomena is supported by the observation of Funkenstein⁶ that variations in an individual's physiologic responses to injected acetylcholine and epinephrine are related to activity or remission of clinical allergic disease.

The twins reported upon here, in whom the genetic background is identical, are strikingly different with regard to allergic manifestations. The age at onset was not the same and there was no similarity in the pattern of attacks. Both were demonstrated by immunologic means to be sensitive to house dust and certain foods. There was no clinical evidence to suggest that food was an important antigenic agent in the development of rhinitis and asthma in these patients. It can be assumed, however, that exposure to house dust was important. The exposure of the twins to house dust was relatively constant, although the clinical manifestation of allergy, especially in the case of A, usually occurred in connection with particular types of stress. The authors believe that emotional stress is accompanied by certain physiologic changes which precipitate clinical allergic disease, and that in the twins herein reported upon both immunologic allergy and the pathophysiologic vascular

changes accompanying emotional stress are of importance in the genesis of clinical allergic reactions.

The differences in the types of situation that produce emotional stress in these twins may be understood in the light of their personality development. The overt stress-producing situations are more clearly defined in A than in B and can be more clearly correlated with the development of episodes of clinical allergic disease. It is of interest that although A is on the surface a better adjusted individual, the price of this adjustment is more frequent emotional tension which is reflected by an increased incidence of clinical allergic manifestation.

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Surgical Treatment of Infantile Hydrocephalus

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THE CONDITION of infantile hydrocephalus is unmistakably portrayed in ancient Greek votive statuettes, but the first written description of it apparently was that of Celsus.¹ He described a disorder of infants "where the fluid distends the skin, causes a swelling of it, and yields to the pressure of the finger: This the Greeks call hydrocephalus."

This early description calls attention at once to the fundamental characteristic of infantile hydrocephalus—the increase of intracranial pressure. The remaining clinical details were gradually filled in during the 19th century; namely, that hydrocephalus is a common disorder, occasionally present at birth but more likely to come on during the first year of life; that it is often associated with spina bifida, and may be precipitated by the repair of a meningocele; and that children afflicted with the condition sometimes survive to adult life, occasionally with intelligence unimpaired. Unfortunately, a serious error was introduced by the pathologic anatomists of that period—confusion between the condition of increased intraventricular pressure or true hydrocephalus according to Celsus, and the enlargement of the cerebral ventricles resulting from atrophy, formerly called "hydrocephalus ex vacuo."

The distinction between spontaneous infantile hydrocephalus and tuberculous meningitis became clear with the introduction of lumbar puncture. Recognition of the physiologic features of the condition resulted from the work of Dandy and Blackfan in 1918 and laid the foundation for a sound surgical approach. Gradually during the following two decades the condition of subdural hygroma became familiar to pediatricians, and the surgical treatment became established. Cases of hydrocephalus resulting from obstruction of the aqueduct by tumors, atresia or inflammatory diseases (such as toxoplasmosis) have been reported from time to time.

This presentation deals solely with the treatment of spontaneous communicating infantile hydrocephalus, with or without meningocele. Medical treatment of this condition appears now to be abandoned and spontaneous recovery is so rare as to elude statistical evaluation. A variety of surgical procedures are now available, however. One of them, to be described in detail, has been well standardized

• *The operation of endoscopic coagulation of the choroid plexuses for the relief of infantile hydrocephalus is now 18 years old. Nearly a hundred cases have been reported and the indications and procedure are well standardized. Several patients have grown up apparently normally from the earliest series of operations.*

In a recent series of 20 operations performed on ten patients in the past ten years, there have been no deaths attributable to the procedure. The operation has substantially decreased the pressure in all cases, and has brought it within normal limits in all cases in which it was performed before the head became grossly enlarged.

The mentality has improved following relief of pressure in all cases. When the operation was performed before deterioration began, the results were uniformly excellent.

for 18 years and can now be performed with little hazard and with a high proportion of excellent results in well selected cases.

DESTRUCTION OF THE CHOROID PLEXUSES

The conception that the spinal fluid is secreted by the choroid plexus originated with Magendie, and isolated attempts (on the whole unsuccessful) to relieve hydrocephalus by destruction of the plexus were carried out in the early years of this century. The possibilities of surgical treatment were, however, first systematically explored by Dandy between 1918 and 1922.^{2, 3} He showed experimentally that removal of the plexus caused collapse of a blocked lateral ventricle in animals, and described a technique for removal of the plexus under direct observation in cases of non-obstructive hydrocephalus.² He did not present statistical studies of his cases. In 1932⁴ he stated that "the survival period has not been long enough to be certain of cures," and in 1938⁵ "I have had several undoubted cures resulting from this method."

The author's technique was published in 1934.⁶ It is based on the use of a distinctive type of coagulating endoscope with a rod of optical glass serving as a viewing system and also as a carrier for two electrodes and a lamp. The instrument gives several

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Figure 1.—*Left*, photograph of patient in third month of life just before coagulation of choroid plexuses. *Center*, patient at six years of age. *Right*, at time of graduation from high school.

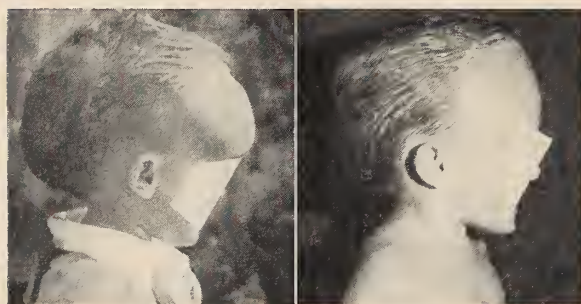


Figure 2.—*Left*, patient at three years of age just before endoscopic coagulation of the choroid plexuses. *Right*, two and one-half years later, after reduction of intracranial pressure had permitted plastic repair of elevated flap of transfrontal operation performed elsewhere. Intracranial pressure was normal at last report.

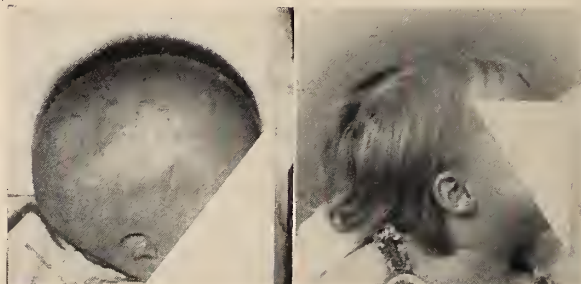


Figure 3.—*Left*, patient at five months of age just before coagulation of choroid plexus. *Right*, patient a little more than two years later. At time of last report, intracranial pressure was normal.

advantages. First, it provides an extremely wide optical aperture, which permits visualization of the ventricular contents even when the fluid is bloody. Second, no current passes through the brain; there is a small intense electrical field between the electrodes. Third, the diameter of the instrument may be kept sufficiently small to permit introducing it into the frontal and temporal horns even before the ventricles have become greatly dilated. This instrument was developed after unsuccessful trial of conventional endoscopes bearing unipolar coagulating electrodes. The employment of these tended to produce necrosis of the floor of the ventricle, and the operative field was poorly seen. An endoscope of the conventional type, with provision for irrigation, was devised by Scarff in 1936⁸ and he still employs it, with excellent results.^{9, 10} In the most recent series of 19 cases reported upon by Scarff there was only

one "operative" death, and the result was excellent in 15 cases. Other surgeons have reverted to Dandy's method, but no significant statistics are reported.

RESULTS

The author's results were last fully reported in 1943.⁷ Disregarding other conditions, 71 operations were reported on 42 patients, with 11 operative deaths, of which seven occurred in the first 17 cases. Since then, 20 operations of this type have been performed, upon ten patients, with no operative deaths.

It has not been possible to get continuing follow-up reports on three of the patients, who were operated upon in New York between 1943 and 1946, but all were doing well in 1946. Of the seven patients operated upon since 1947, four are still alive and doing well, with maintenance or improvement of mentality. One patient who was incompletely re-

lieved by cauterization of the choroid plexuses and then by an additional ventriculomastoidostomy, has done well since a tube was inserted from the subarachnoid space into the peritoneal cavity. One was apparently relieved of hydrocephalus but died of unrelated causes. One died following an attempt at third ventriculostomy.

Since many detailed case reports have been presented by Scarff^{9, 10} and by the author in previous publications, only a few general observations on the indications for operation, on details of technique and on results need be set down here.

First, this operation is a safe one—safer perhaps than ventriculography in such cases, and apparently safer than the recently proposed drainage operations. In the early stages of the disease it is probably safer to operate than to wait in the hope that it will become arrested spontaneously.

Second, the outlook is excellent if patients are referred for operation before the mentality is affected and before there is irreparable damage to the brain. Ideally, the decision for operation should be made when the presenting symptom is a swelling of the fontanelles and infantile hydrocephalus has been diagnosed on the basis of a ventricular puncture with the patient under sedation—a procedure which serves to rule out meningitis, toxoplasmosis, and subdural hygroma and usually renders ventriculography unnecessary.

Third, prognosis depends chiefly upon the patient's intellectual endowment at the time of operation, but the degree of enlargement of the head and thinning of the cortex are limiting factors. Sometimes a patient with enormous ventricular dilation may have an unexpected degree of intelligence and Scarff⁹ has shown that the ventricular wall may grow thicker following relief of intracranial pressure. Gross enlargement of the head may produce secondary adhesions about the base, in which case destruction of the plexuses may not completely relieve the pressure. Many of the poor results, both in the author's series and in Scarff's, would undoubtedly have been avoided had the patients been operated upon sooner.

Fourth, operation may be considered justified even when the patient has mediocre mentality and gross enlargement of the head. Such persons do not necessarily die; they sometimes grow up to adult life with monstrous heads and progressively impaired mentality. It may seem wiser to attempt to arrest the accumulation of fluid and preserve the remaining mentality. Despite relief of pressure, however, patients with poor mentality appear to have a poor life expectancy.

Fifth, ventriculostomy of various types may prove helpful as an adjuvant to cauterization of the plexus,

which appears to be the operation of choice in cases of communicating hydrocephalus. Certainly the drainage operations are more likely to succeed and less likely to lead to complications if the production of fluid is restricted.

Sixth, certain technical refinements have been added to the technique published by the author in 1943.⁷ Suture of the pia to the dura minimizes the danger of collapse of the ventricle at operation, or the formation of subdural cysts. Suture of the pericranium over the suture line decreases the danger of leakage. Drainage of the ventricle through a tiny plastic tube diminishes the postoperative reaction (and in one case this device made it possible to operate on both sides at one time).

Seventh, always after cauterization of both sides, reinspection should be carried out to make quite certain that no tags of plexus were left behind. This is particularly important if the preliminary operations were performed with a ventriculoscope of the cystoscope type.

Eighth, coagulation of the plexuses may be of great help in the treatment of other conditions involving increase of intracranial pressure—for example, postmeningitic hydrocephalus, and large, tense, sessile meningoceles which do not destroy the function of the sphincters.

DISCUSSION

Infantile hydrocephalus is a common condition, perhaps as common as harelip or clubfoot. The condition is easy to recognize, even in early stages. There is a well established surgical operation which entails little hazard and offers an excellent prospect of relief in early cases. To permit one of the unfortunate children with promising mentality to slip past the period of election without a trial of operation is no more conscionable than to permit a patient with meningitis to go without antibiotic drugs.

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ADDENDUM

After this communication was written, a brief review of a presentation of the surgical treatment of hydrocephalus by Walker* became available. It is summarized in the following quotation:

On the basis of the medical literature and the records of

* Walker, A. E.: A Critique of Surgery for Hydrocephalus (abstract of society presentation), *Archives of Neurology and Psychiatry*, 67:822-823, June 1952.

the Johns Hopkins Hospital, the results at the end of two years were as shown in the tabulation:

Operation	No. of Cases	Operative Mortality	Results After Two Yr.†	
			Alive	Dead
Plexotomy	194	70	31	105
Third ventriculostomy	197	44	39	81
Arachnoido-peritoneostomy‡ ..	105	12	41	6
Arachnoido-ureterostomy	86	6	17	28
Ventriculo-cisternostomy	25	8	9	9

† Only the patients whose states were definitely known two years after operation coded.

‡ Based largely on the series of Arendt whose results are not well documented.

It is not clear whether "plexotomy" includes endoscopic coagulation, or whether it refers to Dandy's operation of removal of the plexus. In either case, a comparison between this table and the results reported in the present article speaks for itself.

New Film Catalog

A REVISED LIST of medical and health films has been prepared by the A.M.A.'s Committee on Medical Motion Pictures. Brief descriptions, running time, and rules and regulations are included in the catalog for 78 medical films which are available from the committee. Copies of the list may be obtained from the committee.—*From A.M.A. News Notes.*

Hearing Impairment in Children

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GREAT STRIDES have been made in recent years in the treatment and rehabilitation of persons who are hard of hearing. Excellent results in the alleviation of deafness due to otosclerosis with refinements in the technique of the fenestration operation have been a needed stimulus, as has been the equally optimistic prognosis in overcoming the handicap of deafness in the aural rehabilitation centers of the armed forces. Prevention of deafness is the stressed aspiration in present-day otology.

The study and treatment of children with conditions resulting in lessened acuity of hearing are the means available to greatly diminish the number of hard-of-hearing persons. The more common of these conditions is the basis of this discussion.

It has been estimated by Silverman¹¹ that there are approximately 1,500,000 hard-of-hearing school children in the United States and 18,000 deaf children of school age. Classification into these two distinct groups is, of course, arbitrary, depending upon the degree of hearing impairment. A deaf child is defined as one in whom there is insufficient residual hearing to enable him to make use of hearing for ordinary communication. A hard-of-hearing child is one whose hearing is less than normal but who has sufficient residual hearing for communication either with or without a hearing aid.

The estimate of the number of deaf children is probably accurate, for these children are undertaking definite educational programs either in special classes in local school systems or in one of the numerous schools for the deaf. Accuracy of the estimate of number of hard-of-hearing children is questionable, since no definite criteria have been established universally and the degree of loss of acuity necessary for reporting varies in different parts of the country.

The magnitude of the problem of hearing impairment is indicated by the estimates with regard to children of school age. In addition there are thousands of children of preschool age with hearing loss—in many cases undetected during a period when treatment should be under way. Too many children are classified as backward, dull, mal-

• Abnormal behavior in children may frequently be caused by impairment of hearing. Early detection of the impairment and of the cause are of utmost importance, not only to prevent irreversible changes where that is possible, but to permit early beginning of special training for children who are permanently deaf.

Recent studies have shown that deafness of infants may follow rubella in the mother in early pregnancy, or kernicterus caused by Rh incompatibilities. Measures to control these disorders are being investigated. Adequate and careful treatment of diseases of the nose, as well as surgical drainage of infected ears when necessary, are important factors in the prevention of hearing loss in children.

adjusted misfits, when in reality their difficulty is attributable to hearing impairment which can be alleviated or, if irreversible, overcome as a handicap to normal living in society.

Much of the solution of the problem lies in early diagnosis, which depends in large measure upon careful observation of children by physicians in general practice. Not only can a family physician make a diagnosis and begin treatment early, but by observing and recording the child's early history as well as family history he can add immensely to knowledge of the causes of hearing impairment. It was observations of this kind that gave first clues to the part played by rubella in causing deafness in infants.

CONGENITAL DEAFNESS

Congenital deafness in 30 to 35 per cent of cases is thought to be of Mendelian hereditary type (Kinne).⁸ Anatomical malformations, syphilis during pregnancy, other severe infectious diseases, and the ingestion of toxic agents, including quinine early in pregnancy, are known causes of congenital deafness.

The dangers of syphilis during pregnancy have been greatly diminished by current policies of prenatal serologic studies. In recent years chemotherapeutic agents have controlled the severe infectious diseases thought to cause congenital deafness when they occur during pregnancy. Use of toxic agents in

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attempted abortion may have been reduced by the knowledge that they may cause deformities in the infant if abortion is not accomplished.

In recent studies two important etiological factors have been noted—maternal rubella and Rh factor incompatibility.

During the years 1940 to 1942 there was a widespread rubella epidemic in Australia and a large number of pregnant women had the disease. Later it was noted that among the progeny of women who had rubella during pregnancy the incidence of congenital defects was exceptionally high. Congenital cataracts, patent ductus arteriosus and perception deafness were the most common defects. These abnormalities were found to be most prevalent in children whose mothers had had rubella in the first trimester of pregnancy. Carruthers,¹ reviewing the combined reports of several Australian investigators, noted 74 cases of perception deafness in the offspring of 102 women known to have had rubella during the first three months of pregnancy. Goodhill,^{5, 6} in a survey in this country of 904 cases of profoundly deafened children, found maternal rubella to be the most probable etiological factor in 20.5 per cent of them. Other studies have concurred and definitely established that deafness is a common sequel of maternal rubella if the infection is early in pregnancy.

The deafness is probably caused by the hindrance in the normal development of the primitive cells forming the organ of Corti. This development takes place during the first three months of fetal life. In studies of temporal bones of two fetuses by Schall¹⁰ and of one infant by Carruthers, maldevelopment and blood vessel changes which probably brought on cochlear deficiencies were noted. In each instance the mother had rubella during the first four months of gestation.

Prevention of rubella during early pregnancy is of utmost importance. Isolation, although desirable, is impractical. It has been proposed that, until methods of immunization are found, young girls be exposed intentionally, lest they later contract the disease when pregnant.

Kernicterus sometimes is closely associated with severe degenerative defects in infants. In 1949 Goodhill,^{5, 6} reporting on the relationship between the Rh factor and perception deafness in children, noted that there was history of erythroblastosis fetalis in an inordinate proportion of cases. The coincidence was noted in Rh-positive children of Rh-negative mothers who had been sensitized by previous pregnancies.

Crabtree and Gerrard² reported 16 cases of perception deafness in children who had had severe

neonatal jaundice. In 14 cases the jaundice resulted from iso-immunization. There was no relationship between the degree of deafness and the extent of extrapyramidal lesion. Of 27 perception-deaf children who Goodhill believed had probably had erythroblastosis fetalis, nine were spastic.

Deafness in cases of this kind probably is due to the toxic effect of kernicterus on cranial nuclei. Bile staining in the cochlear nuclei has been noted at postmortem examination. It may be that such damage takes place in subclinical erythroblastotic jaundice also. Further careful investigations must be carried out before it will be possible to determine how often erythroblastosis is associated with perception deafness.

There is no known means of preventing deafness in children of sensitized Rh-negative women. What effect, if any, treatment of erythroblastotic infants as outlined by Dennis³ will have on the incidence of deafness cannot be determined until more data are available.

Not hearing speech, a child born deaf is mute also until he can be taught speech patterns by special means. No medical or surgical treatment for the alleviation of congenital deafness has been found, but great strides have been made in special schools, public and private, in providing means for congenitally deaf children to overcome the handicap. The diagnosis of deafness must be made early and it is the responsibility of physicians undertaking the general care of children to be on the lookout for this defect and to advise parents.

ACQUIRED PERCEPTION DEAFNESS

Perception deafness may be caused by injury to the head, at birth or later, or by severe infectious diseases, such as scarlet fever, measles, influenza, mumps and, especially, meningitis, which is thought to be the cause in 7 to 10 per cent of all cases of acquired perception deafness. Since the advent of streptomycin and, with it, improved prognosis for patients with tuberculous meningitis, question has arisen as to whether deafness is caused by the drug or the disease. The present consensus is that long continued use of streptomycin or dihydrostreptomycin will cause damage to the vestibular and auditory mechanism. Glorig⁴ reported that dihydrostreptomycin may cause irreversible perception deafness, whereas the effect of streptomycin is most pronounced on the vestibular apparatus. Streptomycin, therefore, would seem to be the drug of choice if long term therapy is indicated, assuming that disturbance of balance is a lesser handicap than perception deafness.

Prevention of acquired perception deafness in children calls for avoidance of trauma at delivery.

General immunization, including the use of immune globulin in measles, and the availability of antimicrobial agents have reduced the incidence and the severity of the infectious diseases previously mentioned as etiologic factors.

HEARING LOSS OF CONDUCTION TYPE

Hearing loss of conduction type is much more common in children than is perception deafness. It is caused by abnormalities in the external auditory canal, in the tympanic membrane, or in the middle ear that impair the transmission of sound to the inner ear. Anomalies of the external canal, foreign bodies, impacted cerumen, trauma, and atresia secondary to otitis externa are not uncommon etiologic factors. Distortion of the tympanic membrane, infection of the middle ear, poor aeration of the middle ear, and disease of the ossicular chain and stapedial foot plate also may cause hearing loss of conduction type.

Infection of the middle ear and impairment of aeration of the middle ear by disease of the eustachian tube are the most common causes of conduction loss in children; and these conditions, if not adequately treated, may result in permanent impairment in adulthood.

Acute purulent otitis media, an acute infectious disease characterized by fever, otalgia, and the development of a purulent exudate in the middle ear, may result in distortion of the tympanic membrane. Antimicrobial agents now available give better control of acute infectious diseases. As Rutherford⁹ stated, however, the use of these agents alone in purulent otitis media does not return the middle ear and tympanic membrane to a normal state. Incision of the tympanic membrane for adequate drainage of the purulent exudate from the middle ear is still the treatment of choice either with or without the adjunct of the chemotherapeutic agent specific for the causative organism. When there is spontaneous perforation of the tympanic membrane, it usually occurs in the anterior inferior quadrant and drainage is inadequate and healing poor. Therefore, even in the presence of spontaneous perforation, the prime surgical principle of incision and drainage by careful myringotomy in the posterior quadrant of the tympanic membrane should be applied.

Without myringotomy adhesive processes, middle ear scarring, tympanic membrane distortion, and impaired function with subsequent hearing loss of conduction type may result. A further procedure that should be carried out to preserve normal function of the middle ear after acute infection is inflation of the eustachian tube after the acute disease has subsided and the myringotomy site healed. In children it is good practice to inflate the eustachian tubes before

final dismissal following otitis media. The Politzer method is easy and efficient.

Otitis media with effusion—also termed serous otitis media, catarrhal otitis media, or non-purulent otitis media—is an often overlooked disorder characterized by a sterile effusion of thin yellow transudate or thick mucoid exudate in the middle ear. The effusion is brought about by impaired aeration of the middle ear following eustachian tube blockage. It causes pronounced impairment of hearing and, if not treated, results in permanent changes in the middle ear and the tympanic membrane, with irreversible loss of hearing.

Eustachian tube blockage in children is caused by acute nasopharyngeal infection or any condition, mechanical or infectious, which may cause nasal obstruction. Allergic rhinitis, sinusitis and adenoid hypertrophy are the most common causes.

The diagnosis of otitis media with effusion is not difficult in adults, for they complain of discomfort in the ear and of the "head in a rain barrel" sensation. Children, however, are often unaware of the disorder and careful questioning may be necessary to elicit complaints referable to the ears. Parents or teachers, alerted by a child's inattentiveness or irritability or by his tugging at or scratching the ears, may be the first to note definite impairment of hearing.

Usually upon examination the tympanic membrane is observed to be retracted, the short process of the malleus prominent, and the handle of the malleus shortened. A yellow or amber sheen with increased luster of the drum is typical, and unless the entire middle ear is filled with effusion a meniscus of the fluid level may be seen. Applying suction to the external auditory canal with a Siegle speculum is useful in making the diagnosis, as the motion of the fluid or bubbles in the middle ear can then be observed. Hoople⁷ and others advocate diagnostic myringotomy in questionable cases.

Treatment is directed at restoration of middle ear aeration. Obviously the underlying disorder causing eustachian tube blockage must be corrected. The eustachian tube must be inflated and if fluid persists it must be removed either by aspiration through a tympanic membrane puncture with a No. 20 short-beveled needle or by myringotomy followed by suction and tubal inflation. In persistent cases repeated myringotomy may be necessary.

In any case in which eustachian tube blockage by adenoid hypertrophy has caused middle ear disease and potential hearing impairment, adenoidectomy should be carried out. The age of the patient is not an important factor. Adenoidectomy should be performed when necessary, not when a child reaches a given age indiscriminately picked as the "age for adenotonsillectomy."

Careful removal of all adenoid tissue is important. Quick thrusts into the nasopharynx with dull curette or adenotome are not to be condoned. Careful palpation of the nasopharynx with the finger or direct inspection of the area by use of a palate retractor, such as a Love retractor, is necessary to insure complete removal. It must be noted that palate retractors for direct nasopharyngeal inspection are of little value unless a mouth gag, separate from the tongue blade, is used. Gags of the Davis type put so much tension upon the tonsillar pillars that the palate retractor cannot be used effectively with them.

Postoperative irradiation of nasopharyngeal lymphoid tissue with either external radiation or radium applicators is a well established procedure although results are not as good as initial studies indicated they might be. Radiation therapy does not take the place of adenoidectomy nor should adenoidectomy be done with less care in anticipation of postoperative radiation therapy.

Radiation therapy is indicated if there is a history of recurrent eustachian tube blockage and nasopharyngeal lymphoid tissue is observed in examination either with a mirror or with an electrically illuminated nasopharyngoscope. Rarely is it indicated before surgical removal of the adenoid tissue.

There is a close relationship between allergic rhinitis and adenoid hypertrophy. Enormous growth of adenoid tissue is common in children with persistent nasal allergic disease, and regrowth shortly after adenoidectomy is frequent. In such circumstances the allergic manifestations must be controlled to restore middle ear function, as operation alone will not suffice.

Restoration of middle ear aeration and reestablishment of normal function of the eustachian tube are the basic factors in prevention of conduction type deafness in children.

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Screening Tests for Diabetes Detection

Combined with a Chest X-ray Survey

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LABORATORY ANIMALS with experimentally induced diabetes have recovered as a result of early treatment.^{11, 12} Recovery did not occur when treatment was delayed for more than three months. Untreated control animals died of diabetes. Cure of spontaneous diabetes mellitus in man has not been proven but there is ample evidence that early treatment improves prognosis.^{2, 13, 19} Because of this, the American Diabetes Association has launched a nationwide diabetes detection drive, highlighted each year during Diabetes Week. Over 650 county and state medical societies and many other agencies have actively participated in diabetes detection work.⁶ The subject of this report is the pilot diabetes detection project of the Contra Costa Chest X-Ray Survey, conducted in 1951.

Case-finding programs consisting of more than one screening test have come to be known as multiphasic or multiple screening programs. It is obviously more economical to perform several screening tests at one time than to conduct separate programs, each consisting of a single screening test. Also, a multiphasic approach gives better service to persons screened.^{3, 4} The practicability of chest x-ray surveys and of diabetes detection projects has been demonstrated on numerous occasions. At least two programs consisting of chest x-rays and determinations of the sugar content of the blood have been reported.^{17, 21} The unique feature in Contra Costa County was the combination of diabetes detection with a community-wide rapid tempo mass chest x-ray survey. The objective was to test the value and feasibility of such a combined disease detection program.

The organization and chest x-ray program of the Contra Costa Chest X-Ray Survey have already been reported.¹⁸ The Contra Costa County Medical Society endorsed the program and several of its members served as a medical committee which formulated medical policies for the entire survey. Some of the local physicians were interested in starting a

• *A program was carried out to test the value and feasibility of performing blood sugar screening tests in conjunction with a community-wide chest x-ray survey. A simple, rapid and inexpensive blood sugar screening test requiring only about two drops of blood from the finger tip was used. Among 14,681 persons who stated that they did not have diabetes, 191 or 1.3 per cent had "positive" results in screening tests. The number of persons referred to their physicians for diagnostic study because of the possibility of diabetes was reduced from 191 to 127 by means of a more specific secondary screening test.*

Diagnostic information with regard to 102 of the 127 persons referred to their physicians was supplied by the physicians. In 58 (0.40 per cent of the 14,681 participants) the diagnosis was diabetes—newly discovered as a result of referral by the survey.

Some of the persons referred to their physicians because of suspicion of diabetes, while not then diabetic, might be considered pre-diabetic. The appearance of diabetes in this group during the year following the survey was therefore investigated. Glucose tolerance tests were performed for 32 of the diabetes suspects whose diagnosis immediately following the survey was either "not diabetic" or unknown. In 15 cases the glucose tolerance curves were indicative of diabetes, in seven cases questionable and in ten cases normal.

The 58 persons diagnosed immediately after the survey plus the 15 found to have "diabetic" glucose tolerance curves a year later made a total of 73 newly discovered diabetics. This is a discovery rate of 0.50 per cent among the 14,681 participants in the survey.

The success of this combined diabetes detection and chest x-ray survey suggests that other screening procedures should be studied to determine the desirability of adding them to similar community-wide case-finding programs.

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diabetes detection program. On being asked to participate in a projected chest x-ray survey at about the same time, they had the idea of combining the two projects. A diabetes subcommittee determined procedures for the diabetes detection program. The Contra Costa Chest X-Ray Survey Corporation conducted the survey. The California State Department of Public Health, Contra Costa County Health Department, City of Richmond Health Department, Contra Costa Public Health Association (county tuberculosis association) and the U. S. Public Health Service assisted in both planning and operational phases.

METHOD

The Wilkerson-Heftmann screening test²³ to determine whether the sugar content in the blood is above or below a certain level was selected as the one most suitable for the project. It requires only about two drops (0.1 ml.) of blood, which is easily obtained from the finger tip. With the aid of a machine called the Hewson Clinotron, tests can be performed at a maximum rate of 120 per hour. The test indicates whether sugar content in the blood is above or below a selected screening level. The Wilkerson-Heftmann screening test is a "true blood sugar" method—that is, it does not reflect significant amounts of non-glucose reducing substances. This is in sharp contrast to the more familiar Folin-Wu test, which includes non-glucose reducing substances to a considerable and variable extent.^{8, 10, 14, 15} Because tests of the blood for sugar are more sensitive and more specific for diabetes than urinary sugar tests,⁷ urine specimens were not obtained. Only capillary blood was used in this program, although the Wilkerson-Heftmann method may be also used for venous blood. In the fasting state capillary and venous blood sugar values are almost identical. Following a carbohydrate meal, the sugar content of capillary blood rises higher and remains somewhat higher than does that of venous blood for at least three hours.¹⁴

An intensive publicity campaign urged the public to participate in the chest x-ray survey. Eighteen minifilm x-ray units were operated for varying periods in many locations throughout the county. Two to four of the 18 x-ray units were staffed with additional clerks and laboratory technicians for registration and collection of blood specimens. Because blood sugar screening tests were available at only a few of the x-ray units, no community-wide publicity was given to this phase of the program. The tests were simply offered as an additional service to persons who came to certain locations for a chest x-ray.

All participants were asked, "Do you have diabetes?" and, "Did you eat or drink anything during

the last two hours?" For persons who answered "No" to the second question or who had consumed only non-caloric fluids, the dividing line selected for screening was 130 mg. of sugar per 100 cc. of blood. For others the dividing line was 180 mg. per 100 cc. All participants were notified of their test results.

Primary screening tests are not diagnostic, and appropriate medical and laboratory examination will show that a certain proportion of persons with "positive" results in screening tests are in good health. Secondary screening tests, while still not diagnostic, are more specific. They are designed to save both physicians' and patients' time by minimizing referrals of persons who do not have the disease the tests are designed to detect. Persons who stated they did not have diabetes and whose primary screening test indicated blood sugar content above the screening level were asked to return in a fasting condition to a Retake Center for a secondary screening test. They were given 50 gm. of dextrose orally and one hour later a specimen of capillary blood was obtained and tested to determine whether the sugar content was above or below 180 mg. per 100 cc. These recheck or secondary screening tests were not done with the subject in the fasting state because even persons with diabetes may have normal content of sugar in the blood while fasting.^{1, 2, 20} Part of the hour between administration of dextrose and collection of the blood specimen was used for an interview with a public health nurse. The nurse explained that the screening tests are not diagnostic—that they merely select out of a group of persons the few who should visit their physicians at once because of the possibility of diabetes. Questions were answered and further information given to prevent undue anxiety. The nurse also obtained the name of the physician to whom a report should be sent if test results indicated need for further observation. The following criteria for referral to physicians were used: (1) primary screening test showing over 180 mg. of sugar per 100 cc. of blood, regardless of secondary screening test result, or (2) primary screening test showing over 130 mg. per 100 cc. and secondary screening test over 180 mg. per 100 cc. or not accomplished.

Persons who stated they had diabetes and who had had blood sugar content above the screening level were also asked to return for a recheck test. However, they were not requested to report in fasting condition and were not given a test meal. The reasons for asking them to return were to determine whether they had lapsed from regular medical care, to impress upon them the importance of continuing medical supervision, and to obtain names of their physicians.

To evaluate results of the survey, physicians were asked to report whether a diagnosis of diabetes was established and whether the diagnosis, if any, was made as a result of referral by the survey. With regard to persons previously known to have diabetes, physicians were asked whether the patient had been following medical treatment for diabetes with reasonable regularity, and if not, whether the patient made at least one visit as a result of the survey.

Some of the persons who were referred to physicians on suspicion of diabetes, while not diabetic at the time of referral, might be considered "prediabetic." A recently reported study⁹ of 55 "prediabetic" persons who were observed for one to 25 years showed that diabetes eventually developed in 33 cases. Accordingly, it was considered worthwhile to reexamine some of the diabetes suspects a year after the survey. This follow-up consisted of a standard three-hour glucose tolerance test. The Folin-Wu method of determining sugar content of the blood was used because it is the one with which physicians in this area are most familiar.

PRIMARY SCREENING TEST RESULTS

One hundred ninety-one (1.3 per cent) of the 14,681 persons screened who said they did not have diabetes had blood sugar values above the stated screening levels. Among the 7,373 screened with 130 mg. of sugar per 100 cc. as the dividing line (because of a negative answer to the question, "Did you eat or drink anything during the last two hours?") 141 or 1.9 per cent had blood sugar content on the "positive" side of the line. Of the 7,308 persons screened at 180 mg. per 100 cc., 50 or 0.7 per cent had "positive" results. The difference between the "positive" percentages in these two groups may be attributed in part to inaccuracy of answers to the question concerning recent ingestion of food.

Of the 182 previously known to have diabetes, 68 (37.4 per cent) had blood sugar values above screening levels. There was no significant difference between the proportion of "positive" results among those screened at 130 mg. per 100 cc. of blood and the proportion among those screened at 180 mg. per 100 cc. The percentage of "positive" results was substantially the same for 61 males as for 121 females. Age proved to be a significant factor. Twenty-four per cent of 79 diabetic persons under age 50 and 48 per cent of 103 who were 50 years of age or older were "positive" in screening tests. Fourteen of the 182 persons previously known to have diabetes stated at the time of the primary screening test that they did not have the disease. When reporting for the secondary screening test, eight of them stated that they had known even at the time of the first test that they had diabetes. Information about existence of previously known diabetes in the other six was obtained from their physicians.

TABLE 1.—Number of Persons Tested, Number of "Positives" and Per cent of "Positive" by Screening Level

Screening Level	Number Tested	Number "Positive"	Per cent "Positive"
<i>Not Previously Known Diabetics</i>			
130 mg. per 100 cc.....	7,373	141	1.9
180 mg. per 100 cc.....	7,308	50	0.7
Total—both levels.....	14,681	191	1.3
<i>Previously Known Diabetics</i>			
130 mg. per 100 cc.....	104	39	37.5
180 mg. per 100 cc.....	78	29	37.2
Total—both levels.....	182	68	37.4

TABLE 2.—Number of Tests of Persons Not Known To Have Diabetes, Number "Positive" and Per cent "Positive" by Screening Level, Age Group and Sex

Screening Level	Age Group	Total "Positive"			Male "Positive"			Female "Positive"		
		No. Tested	No.	Per cent	No. Tested	No.	Per cent	No. Tested	No.	Per cent
130 mg. sugar per 100 cc. of blood—	Under 20	377	5	1.3	179	3	1.7	198	2	1.0
	20-29	1,567	8	0.5	686	4	0.6	881	4	0.4
	30-39	1,987	21	1.1	804	8	1.0	1,183	13	1.1
	40-49	1,511	31	2.1	699	17	2.4	812	14	1.7
	50-59	1,067	46	4.3	500	26	5.2	567	20	3.5
	60-69	587	21	3.6	273	9	3.3	314	12	3.8
	70 & over	225	9	4.0	125	6	4.8	100	3	3.0
	Unknown	52	....	....	19	....	....	33	....	....
	All ages	7,373	141	1.9	3,285	73	2.2	4,088	68	1.7
180 mg. per 100 cc.—	Under 20	639	3	0.5	294	1	0.3	345	2	0.6
	20-29	1,754	11	0.6	735	7	1.0	1,019	4	0.4
	30-39	1,996	8	0.4	895	5	0.6	1,101	3	0.3
	40-49	1,414	5	0.4	706	4	0.6	708	1	0.1
	50-59	860	11	1.3	402	5	1.2	458	6	1.3
	60-69	458	11	2.4	259	9	3.5	199	2	1.0
	70 & over	142	1	0.7	76	....	....	66	1	1.5
	Unknown	45	....	....	14	....	....	31	....	....
	All ages	7,308	50	0.7	3,381	31	0.9	3,927	19	0.5

TABLE 3.—Secondary Screening Test Results of Persons Not Previously Known to Have Diabetes

Original Screening Test		Secondary Screening Test*		
Screening Level (mg. of sugar per 100 cc. of blood)	Number "Positive"	Number Tested	Number "Positive"	Per cent "Positive"
130 mg.....	141	123	59	48
180 mg.....	50	41	25	61
Total—both levels....	191	164	84	51

* Participants reported in fasting condition. They were tested at the 180 mg. per 100 cc. screening level one hour after ingestion of 50 grams dextrose.

Table 2 gives screening test results for persons who stated they did not have diabetes. In general, the percentage of "positive" results was higher among males than females. The incidence of "positive" was more than three times as great in persons of age 50 and over as it was in younger persons.

The screening tests for blood sugar content proved to be much more popular than it was thought they would be. On many occasions persons who wished to have the test did not get it because there were not enough technicians on duty. This was particularly true of a shopping district location at which 14,986 chest x-rays were taken and only 6,250 specimens of blood were obtained. Lack of space made it impossible to have more than one technician obtaining specimens of blood at this testing station. At four of the 15 locations (exclusive of Retake Centers) where blood sugar tests were available, the number of blood specimens obtained exceeded the number of x-rays taken. In two of these instances the number of blood sugar specimens was more than twice as great as the number of x-rays. This occurred because most of the testing stations had only x-ray equipment and many persons who had x-ray films made at these stations subsequently visited other locations to have a blood sugar test. At testing stations where both chest x-ray and blood screening tests were available, an average of 55 per cent of participants took both. (In a more recent multiphasic screening program in Orange County, with adequate publicity and with two technicians collecting blood at each testing station, 94 per cent of participants received blood sugar tests.¹⁶)

SECONDARY SCREENING TEST RESULTS

All persons with "positive" results in the primary blood sugar screening test (see Table 1) were asked to return for a secondary blood sugar screening test. In these tests 180 mg. of sugar per 100 cc. of blood was the screening level. Capillary blood was tested by the Wilkerson-Heftmann method. Persons previously known to have diabetes were tested without dietary preparation. Others reported in a fasting condition and were tested one hour after ingestion of 50 gm. of dextrose.

Secondary blood sugar screening tests were performed for 164 (86 per cent) of the 191 persons in whom diabetes was suspected. Results of these tests are presented in Table 3. Eighty-four (51 per cent) of the 164 secondary tests were "positive"—that is, indicated capillary "true blood sugar" values above 180 mg. per 100 cc. Among persons originally "positive" when screened at the level of 130 mg. of sugar per 100 cc. of blood, 59 or 48 per cent of 123 had "positive" results in secondary tests. Among those originally "positive" at 180 mg. per 100 cc., 25 (61 per cent) of 41 were "positive" in secondary tests.

Twenty-eight or 64 per cent of the 44 persons previously known to have diabetes who returned for a second test had blood sugar values above 180 mg. per 100 cc.

NEWLY DISCOVERED CASES OF DIABETES

It has been shown that there were 191 persons with "positive" results in primary screening tests among the 14,681 persons who stated that they did not have diabetes. More specific secondary screening tests were performed for 164 of these 191 persons. Sixty-four persons whose primary screening test was "positive" at the screening level of 130 mg. of sugar per 100 cc. of blood, but whose secondary screening test was "negative" were excluded from further consideration. Thus the number referred to their physicians with suspicion of diabetes was reduced from 191 to 127.

Diagnostic reports were received from physicians for 102 of the 127 persons referred with suspicion

TABLE 4.—Diagnosis, Screening Level of Primary Screening Test and Result of Secondary Screening Test of Persons with "Positive" Primary Screening Test Who Were Not Previously Known to Have Diabetes

Diagnosis	Total	Persons with Primary Test "Positive" at 130 mg. of sugar per 100 cc. of blood			Persons with Primary Test "Positive" at 180 mg. of sugar per 100 cc. of blood		
		Pos.	Neg.	None	Pos.	Neg.	None
Diabetes (newly discovered).....	58	34	....	7	16	1	....
Not diabetes.....	44	20	....	4	6	10	4
Unknown.....	25	5	....	7	3	5	5
Subtotal.....	(127)	(59)	....	(18)	(25)	(16)	(9)
(Not referred to physicians).....	64	....	64	....	....	....	....
Total.....	191	59	64	18	25	16	9

TABLE 5.—Newly Discovered Diabetics by Primary Screening Level, Age Group and Sex

Primary Screening Level (sugar per 100 cc. of blood)	Age Group	Number of Newly Discovered Diabetics			Per cent of All Participants Reported as Newly Discovered Diabetics		
		Total	Male	Female	Total	Male	Female
130 mg.....	All ages	41	15	26	.56	.46	.64
180 mg.....	All ages	17	8	9	.23	.24	.23
Total—Both Screening Levels—	Under 20	....	....	....	....	....	....
	20-29	3	1	2	.09	.07	.11
	30-39	7	2	5	.18	.12	.22
	40-49	14	7	7	.48	.50	.46
	50-59	22	8	14	1.14	.89	1.37
	60-69	12	5	7	1.15	.94	1.36
	70 & over	....	....	....	....	....	....
	All ages	58	23	35	.40	.35	.44

of diabetes (Table 4). The other 25 persons either did not seek medical advice or could not be traced. Fifty-eight of the 102 reports from physicians stated that the diagnosis was diabetes and that the disease was detected as a direct result of referral by the survey. These 58 newly recognized cases represent a diabetes discovery rate of 0.40 per cent. In other words, one out of every 250 participants in the blood sugar screening program was found to have previously unrecognized diabetes.

The diabetes discovery rate was relatively high in age groups above 50 and somewhat higher in females than males. Thirty-four of the 58 newly discovered cases of diabetes were found among the 2,972 participants aged 50 to 69, a discovery rate of 1.14 per cent. Twenty-four cases of diabetes were found among 11,709 other participants, a discovery rate of 0.20 per cent. Although the incidence of "positive" results in primary screening was considerably higher in males (see Table 2), the diabetes discovery rate was 0.35 per cent for males and 0.44 per cent for females.

It may also be seen in Table 5 that there was a large difference in the diabetes discovery rate with respect to primary screening levels. Among the 7,373 persons originally tested at the 130 mg. per 100 cc. blood sugar screening level, 41 or 0.56 per cent were subsequently found to be diabetic. Among the 7,308 originally tested at the 180 mg. per 100 cc. level, only 17 or 0.23 per cent were shown to be diabetic. If age-specific and sex-specific discovery rates of the former group are applied to the latter group, it is found that discovery of 36 instead of 17 new cases of diabetes might have been expected. It will be recalled that the primary screening level for each participant was determined by the answer to the question, "Did you eat or drink anything during the last two hours?" Incorrect affirmative answers would tend to lower the percentage of "positive" results at the 180 mg. per 100 cc. screening level whereas incorrect negative answers would tend to raise the percentage of "positive" results at the 130 mg. per 100

cc. screening level. There was no way of quantitatively determining the effect of incorrect answers on primary screening test results in this survey. It is apparent, however, that an appreciable number of unrecognized cases of diabetes escaped detection by the primary screening test at the 180 mg. per 100 cc. level. Greater sensitivity would have been achieved by using a lower screening level.

If screening levels of 130 mg. and 160 or 170 mg. per 100 cc. (instead of 130 mg. and 180 mg. per 100 cc.) had been used, the diabetes discovery rates in the two screening level groups would probably have been more nearly equal. Recently reported studies of blood sugar screening levels^{7, 22} are not directly applicable to surveys of the type here described because they use different criteria for "fasting" and "postcibal."

Information as to whether patients were under regular medical supervision was obtained for 64 of the 68 persons previously known to have diabetes who had a "positive" result in the primary screening test. In ten cases information was obtainable only from the patient: Four stated they were under regular medical care and six that they did not visit physicians regularly nor did they consider it necessary to do so. In 54 cases information was obtained from physicians: 38 patients had been following medical advice with reasonable regularity and 16 who had lapsed from care visited their physicians at least once as a result of the survey.

FOLLOW-UP ONE YEAR AFTER SURVEY

Some of the persons who were referred to their physicians because diabetes was suspected, while not then diabetic, might be considered prediabetic.⁹ The appearance of diabetes in this group during the year following the survey was therefore investigated. The 44 persons diagnosed as "not diabetic" immediately after the survey were asked by their physicians to report for glucose tolerance tests one year later. Glucose tolerance tests were also offered to the 25 per-

TABLE 6.—Glucose Tolerance Tests of Possibly "Prediabetic" Persons, One Year After Diabetes Detection Survey

Status at Time of Survey			Glucose Tolerance Tests One Year After Survey							
Age and Sex	Primary Screening Level (mg. per 100 cc.)	Diagnosis Immediately After Survey	Sugar Content of Blood (mg. per 100 cc.)					Glycosuria	Acetonuria	Interpretation
			0	After Ingestion of 100 Grams Glucose at Stated Hours	30 min.	1 hr.	2 hr.			
67 M	130	Not diabetic	156	257	348	343	226	4 plus	Trace	Diabetic
53 M	130	Not diabetic	234	334	388	322	287	4 plus	Neg.	Diabetic
74 F	130	Not diabetic	226	286	336	302	210	4 plus	Neg.	Diabetic
58 F	130	Not diabetic	264	346	371	300	356	4 plus	Trace	Diabetic
56 M	130	Not diabetic	135	228	307	218	153	1 plus	Neg.	Diabetic
44 F	130	Not diabetic	165	295	348	187	124	2 plus	Neg.	Diabetic
28 M	130	Not diabetic	143	204	234	183	130	Trace	Neg.	Diabetic
65 F	130	Not diabetic	143	178	200	177	143	Neg.	....	Diabetic
70 M	130	Not diabetic	83	180	248	159	86	4 plus	Neg.	Diabetic
38 M	130	Not diabetic	98	169	201	157	98	Trace	Neg.	Diabetic
52 M	130	Not diabetic	130	204	274	152	100	3 plus	Neg.	Diabetic
61 F	130	Not diabetic	74	166	157	144	101	Neg.	....	Questionable
60 F	130	Not diabetic	135	174	183	130	84	Neg.	....	Questionable
69 M	130	Not diabetic	130	214	187	126	109	Neg.	....	Questionable
59 F	130	Not diabetic	130	185	191	113	117	Neg.	....	Normal
72 M	130	Not diabetic	100	167	189	100	72	Neg.	....	Normal
4 M	130	Not diabetic	85	114	125	100	101	Neg.	....	Normal
27 M	130	Not diabetic	109	187	157	78	70	2 plus	Neg.	Normal
46 M	130	Not diabetic	106	152	126	68	86	Neg.	....	Normal
42 M	130	Unknown	185	242	380	314	243	4 plus	Neg.	Diabetic
54 M	130	Unknown	162	284	258	210	184	4 plus	Trace	Diabetic
52 M	130	Unknown	104	174	217	109	74	Trace	Neg.	Questionable
53 M	180	Not diabetic	113	208	274	156	96	1 plus	Neg.	Diabetic
48 M	180	Not diabetic	122	234	256	130	78	3 plus	Neg.	Questionable
62 M	180	Not diabetic	126	182	191	117	87	Neg.	....	Normal
37 M	180	Not diabetic	113	236	182	98	96	Trace	....	Questionable
32 M	180	Not diabetic	109	160	139	78	87	Neg.	....	Normal
61 M	180	Not diabetic	84	157	166	77	50	Neg.	....	Normal
29 M	180	Not diabetic	122	174	156	70	92	Neg.	....	Normal
70 F	180	Unknown	320	420	515	400	470	4 plus	Neg.	Diabetic
38 M	180	Unknown	122	161	109	107	113	Neg.	....	Normal
15 M	180	Unknown	115	217	122	96	74	Neg.	....	Questionable

Note: Within each of the four screening level-diagnosis groups, glucose tolerance tests are arranged in order of descending 2-hour blood sugar values.

sons whose diagnoses could not be obtained at the time of the original survey. Standard three-hour glucose tolerance tests with a test meal of 100 gm. of glucose were performed for 26 of the former and for six of the latter. The Folin-Wu method was used. Results are shown in Table 6.

The standard glucose tolerance test is the most exacting and precise method now available for determining the presence or absence of diabetes in doubtful cases. In normal persons the fasting venous blood sugar value (Folin-Wu method) is below 120 mg. per 100 cc., does not rise over 200 mg. per 100 cc. and returns to 120 mg. or less in two hours.^{1, 5} Duncan⁵ considers tolerance curves indicative of diabetes if the two-hour value exceeds 130 mg. per 100 cc. and the clinical evaluation is in keeping with the diagnosis. In complicating conditions such as thyrotoxicosis he considers two-hour values up to 150 mg. "nondiabetic" if the three-hour value is below 120 mg.

Since complete clinical data are not available, the tolerance curves in Table 6 were evaluated by the following criteria:

Diabetic.....2-hour value over 150 mg. per 100 cc.

Questionable.....2-hour value 121 to 150 mg. per 100 cc. or peak value over 200 mg. per 100 cc.

Normal.....2-hour value not over 120 mg. per 100 cc. and peak not over 200 mg. per 100 cc.

Among the 26 persons tested who were reported by their physicians as "not diabetic" at the time of the survey, 12 had "diabetic" glucose tolerance curves one year later and five others had questionable curves. Among the six persons tested whose diagnoses at the time of the survey were unknown, three had "diabetic" glucose tolerance curves and two had questionable curves. These results clearly indicate the need for continued clinical observation of persons suspected of having diabetes. Diabetes eventually develops in a large proportion of such persons.⁹

DISCUSSION AND CONCLUSIONS

Blood sugar screening tests and minifilm chest x-rays constitute a practical combination for community-wide disease detection programs. Both procedures are highly acceptable to the public. The effectiveness of the diabetes detection tests was demonstrated by the discovery of 58 previously un-

recognized cases, a discovery rate of 0.40 per cent, as reported by physicians who performed follow-up examinations soon after completion of the screening tests.

Blood sugar screening tests, especially if performed without prior dietary preparation of subjects, will permit diabetes to escape detection in some cases. The procedures used in this survey yielded discovery rates of 0.56 per cent for persons screened with 130 mg. of sugar per 100 cc. of blood used as the dividing line between "negative" and "positive," and 0.23 per cent for those screened at 180 mg. per 100 cc. The former had not eaten during the two hours preceding the primary screening test. The discovery rate in the latter group was deficient. It is recommended that in future surveys persons who have eaten within two hours be screened at a blood sugar level lower than 180 mg. per 100 cc.—at 160 or 170 mg. per 100 cc. This is considered a more practical approach than efforts to have large numbers of persons eat specified test meals or to obtain detailed dietary histories.

Publicity and community organization are essential to obtain participation of large segments of the population in screening programs. Information concerning the entire program rather than only one segment of it should be given. A community-wide educational program on diabetes was not possible in Contra Costa County because the blood sugar screening tests were available at only a few of the testing stations.

In 15 of the 32 cases in which glucose tolerance tests were performed on diabetes suspects one year after the survey, the results were interpreted as indicative of diabetes. Results in seven cases were considered questionable, and in ten were normal. These findings emphasize the need for careful and prolonged observation of diabetes suspects.

The 58 persons in whom diabetes was diagnosed immediately following the survey plus the 15 found to have diabetic glucose tolerance curves a year later make a total of 73 newly discovered cases of diabetes, a discovery rate of 0.50 per cent. This rate is approximately five times as great as the discovery rate for active tuberculosis in this survey.

The success of this combined diabetes detection and chest x-ray survey suggests that other screening procedures should be studied to determine whether it would be desirable to add them to similar programs.

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Chemical Agents in Neoplastic Diseases

An Evaluation of Chemotherapeutic Substances for Clinical Management

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THE THREE BASIC AIMS of chemotherapeutic agents for neoplastic diseases are to cure, to arrest, and to palliate.⁷ No chemotherapeutic agent to date has been found to cure any neoplastic disease. The cure of cancer today rests with surgical or roentgen therapy. Therefore, the agents to be discussed are either arrestive or palliative. It must also be emphasized that a given agent may arrest specific neoplasms and yet be only palliative or even totally ineffective for others. Similarly, agents ineffective when given intravenously may temporarily arrest some tumors when used topically, intra-arterially or by other modes of administration. The point of attack upon the cancer cell has many approaches and the possibilities of favorably altering these avenues of entrance into the intrinsic mechanism of neoplastic cells may materially enhance the action of substances which are currently ineffective.

The number of chemical agents which have shown some activity against neoplastic diseases has increased considerably in the past ten years. Few of these agents have had extensive clinical trial. Studies of many in animal experimentation have only recently been completed and the clinical experience is encouraging but certainly not conclusive. Of all the compounds listed, nitrogen mustard (HN₂), colchicine, urethane, arsenic, the diamidines, antimony and the endocrines are readily available. These and the remaining substances are under active employment. These latter agents must remain in the investigative stage until the evidence gathered in patients can be thoroughly evaluated for toxicity, effectiveness and possible late, untoward reactions.

The agents have been grouped relative to their alleged mode of action or origin to assist physicians in gaining some insight for proper selection of the substances in the management of some neoplastic diseases (Table 1).

I. RADIOMIMETIC AGENTS

1. *Nitrogen mustards: Beta-chloroethyl amines (HN₂ and HN₃).* Over 600 congeners of methyl-bis (Beta-chloroethyl) amine (HN₂) have been pre-

• The rapid appearance of many new chemical substances which possess some antineoplastic effects has created a complex problem for the practicing physician. These agents which have shown promise in man and lower animals are grouped according to their modes of action. Each substance is discussed thoroughly with regard to its structure, activity, and influence upon the neoplasms of man. Key references are cited, and the practical value of each chemical agent is defined. The proper methods of administration of the compounds recommended for use are carefully described. In addition a section on agents whose therapeutic value has been disproven is also included.

pared^{119, 22, 80, 81} but none have been shown to possess any significant therapeutic advantage over HN₂ or HN₃.^{81, 135, 158} In many institutions, HN₂ is administered in doses of 0.1 mg. per kilogram of body weight daily for three or four consecutive days in strict adherence to the early recommendations concerning its use.^{119, 22} The administration of the total dose per kilogram of body weight in one single dose is equally effective, simpler and less traumatic to the patient since the nausea and vomiting following the HN₂ occurs only once and not three or four times as with the divided dose schedule.¹⁴

The material is best given into the stream of a rapid infusion of isotonic saline solution (Figure 1). The infusion should be started with a large bore needle (No. 18) to ensure a constant full stream of saline solution running rapidly when the HN₂ is injected into the stream through the rubber tubing attached to the needle. The HN₂ should be dissolved in isotonic saline solution, 10 cc. per bottle (10 mg.), reaspirated into a Luer-Lok[®] syringe and administered as rapidly as possible after solution. A No. 18 needle permits rapid mixing, but the injection into the saline infusion stream is best accomplished with a No. 25 or No. 26 needle. This technique minimizes or prevents thrombosis of the vein because the HN₂ is well diluted by the large volume of the saline infusion and does not irritate the vein.

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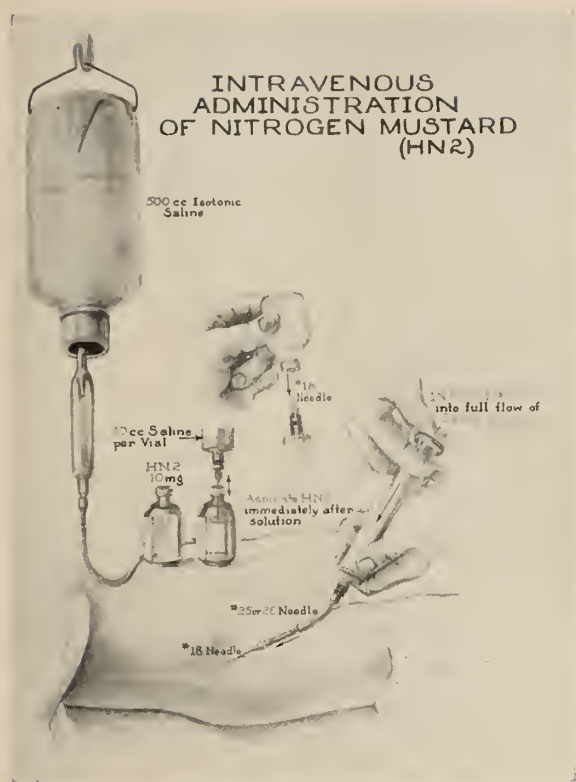


Figure 1.—A method of safe administration of agents which otherwise might cause venous thromboses. No. 18 needles are employed for rapid infusion of saline solution and for solution and transfer of the chemical. The smaller needle (No. 25 or No. 26) prevents too rapid administration.

The toxic effects of HN_2 are mainly those of depression of the hematopoietic tissues.⁷⁹ In patients with normal hematopoiesis, doses of 0.3 mg. per kilogram of body weight may be given at four- to six-week intervals for four to six months since the dearth of leukocytes is greatest 10 to 14 days following HN_2 and usually the number of leukocytes returns to normal within 20 to 25 days after administration.¹⁴ In patients with impaired hematopoietic function, the intervals at which HN_2 may be readministered must be determined by frequent hematological study. It is advisable to count the leukocytes and platelets three times each week and the erythrocytes weekly until the count returns to normal. Occasional patients have pronounced sensitivity to HN_2 characterized by extreme nausea and retching, generalized erythema, and exhaustion. A generalized maculopapular eruption similar to that described by Zanes¹⁷⁰ has also been observed. A distinct conditioned reflex develops in some patients so that nausea and retching will occur *prior* to administration if the HN_2 is prepared in the presence of the patient.

Although the leukocyte count frequently falls to and below 1,000 per cu. mm. of blood following the repeated administration of HN_2 intravenously, the

TABLE 1.—Agents Under Investigation for the Treatment of Neoplastic Diseases

- I. RADIOMIMETIC AGENTS
 1. Nitrogen mustards: Beta-chloroethyl amines (HN_2 and HN_3)
 2. Triethylene melamine: Trisethylene-imino-s-triazine (TEM)
 3. R-48: Beta-naphthyl-di-2-chloroethyl amine
 4. Hemi-sulfur mustard: 2-chloro-2'-hydroxydiethyl sulfide (HSM)
- II. MITOTIC INHIBITORS
 1. Colchicine
 2. Podophyllin and Podophyllotoxin
 3. Peltatins
 4. Urethane: ethyl carbamate
 5. Arsenic: Potassium arsenite (Fowler's solution)
- III. SUBSTANCES TOXIC TO CELLS
 1. GT-41: 1,4-dimethane sulfonyl butane
 2. Diamidines: Stilbamidine and Pentamidine
 3. Alloxan: Mesoxyl urea
 4. Antimony
- IV. ANTIMETABOLITES
 1. Folic acid antagonists: 4-amino pteroyl-glutamic and aspartic acids
 2. Adenine antagonist: 2,6-diaminopurine
 3. Guanine antagonist: 8-azaguanine
 4. Pyridoxine antagonist: desoxypyridoxine
 5. Para-amino-benzoic acid (PABA)
 6. Riboflavin inhibitor: galacto-riboflavin and iso-riboflavin
 7. Melanin antagonist: Mono-benzyl ether of hydroquinone
- V. ENDOCRINE SUBSTANCES
 1. Androgens: Testosterone propionate, methyltestosterone and methylandrostenediol (MAD)
 2. Estrogens: Stilbestrol, estradiol and related compounds
 3. Progesterone
 4. Corticotropin (ACTH)
 5. Cortisone: 17-hydroxy-11-dehydrocorticosterone (Compound E)
 6. Para-hydroxy-propiophenone
- VI. BIOLOGIC AND BACTERIAL PRODUCTS
 1. Shear's polysaccharide
 2. Lymphokentric and myelokentric acids
 3. Rabies vaccine
- VII. AGENTS OF RECENT INTEREST WHOSE EFFECTIVENESS HAS NOT BEEN SUBSTANTIATED TO DATE
 1. Krebiozen
 2. ACS—Antitreticular cytotoxic serum
 3. K-R: Klyueva-Roskin vaccine
 4. Chymotrypsin

original fears of fulminating infections during the agranulocytic period have not been realized. The thrombocytopenia, however, is of more serious consequence. Patients may be permitted to be ambulatory with the leukocyte count fluctuating between 1,500 and 4,000 cu. mm. provided they are carefully

and frequently observed, although antibiotics may be deliberately withheld until definitely indicated. If bleeding occurs, strenuous antihemorrhagic measures should be initiated.

A patient with a single initial node of Hodgkin's disease without evidence of any other involvement is best treated by wide surgical excision followed by intensive irradiation of the area if there is any doubt concerning total excision. Where more than a single area is involved, x-ray therapy to the local sites in combination with HN_2 for the systemic involvement is advisable. Like x-ray therapy, nitrogen mustard will lose its original beneficial effect after repeated employment. On the other hand, the initial administrations of nitrogen mustard occasionally may be disappointing and subsequent doses prove effective, so that it is not wise to forsake HN_2 after the initial courses until it is certain that the patient will not respond to this agent. If a patient with a diagnosis of Hodgkin's disease does not respond to either x-ray or HN_2 , a careful reevaluation of the biopsy material should be undertaken to substantiate the diagnosis, particularly to exclude a malignant thymoma.⁹⁶ Nitrogen mustard is a useful adjunct to radiotherapy of Hodgkin's disease and particularly serviceable after irradiation has lost its effectiveness. While this therapy does not prolong life over conventional x-ray treatment, it reduces the requirements for radiation, the asymptomatic periods are longer and the patient is more easily controlled.⁴⁶

Nitrogen mustard is effective for shorter periods in lymphosarcoma (lymphoblastic or lymphocytic types) than in Hodgkin's disease. The clasmatocytic or primitive cell lymphosarcoma (reticulum cell sarcoma) often does not respond to nitrogen mustard but in an occasional case there may be pronounced benefit from this agent.

Patients with widespread mycosis fungoides are often benefited by HN_2 for periods of one to five months but eventually the favorable response can no longer be repeated. While the intravenous administration of HN_2 will favorably influence the course of patients with lymphomata, it has failed completely in the treatment of other neoplasms except possibly for some transient effects in bronchogenic carcinoma.^{135, 14} Investigations upon the blood supply of tumors have revealed that many neoplasms possess an increased arterial blood supply,¹⁰ increased capillary permeability¹² and a characteristic vascular pattern upon arteriography.¹³ The intra-arterial administration of HN_2 leading directly to localized mycosis fungoides lesions of the extremities results in prompt clearing of the involved areas. The administration of HN_2 intra-arterially directed to the tumor site results in higher concentrations of HN_2 at the tumor site than can be attained safely by the intravenous route⁸ and has caused considerable

dissolution of many types of neoplasms unrelated to the lymphoid series although in no instance were the lesions completely eradicated. Temporary improvement for months has been observed in approximately 30 per cent of patients with widespread, far-advanced, visceral metastases involving the liver, kidney and lung that were so treated.^{8, 9} Klopp and his associates⁸⁸ infused HN_2 intra-arterially into superficially located carcinomas of the head and neck over periods of four to ten days and pronounced regression of the neoplasms was noted. The intra-arterial route of therapy is still in the investigative stage but this approach presents many possibilities for a direct attack upon tumor masses.

2. *Triethylene melamine: Trisethylene-imino-s-triazine (TEM)*. This compound is the result of investigations to find less distressing and less toxic substances which exert mustard-like activity.¹²⁴ Triethylene melamine, abbreviated to TEM, is chemically related to HN_2 by its transformation in the body to form ethylene-imine rings which are considered the pharmacologically active group of both TEM and HN_2 .¹¹⁸ TEM can be administered both parenterally and orally without immediate untoward reaction, and in most instances without emesis although nausea and anorexia are common complaints.^{169, 82, 136} The intravenous dosage is about 0.05 mg. per kilogram of body weight, the total single dosage never to exceed 5 mg. Doses in excess of 0.25 mg. per kilogram of body weight intravenously are lethal in man.¹³⁶ Orally the dose is 0.1 to 0.3 mg. per kilogram of body weight, and the material is dispensed in 5 mg. tablets. The total oral daily dose should not exceed one tablet (5 mg.); if larger doses are contemplated, three to four days should elapse between the doses.

The major toxic effects of TEM are essentially similar to those of the nitrogen mustards, the major component of which is the depression of the hematopoietic system, resulting in leukopenia, thrombocytopenia and, less often, anemia. As multiple doses of TEM are cumulative, too frequent or excessive administration of the material may result in toxic effect beyond that generally anticipated.¹³⁶ Leukocyte and platelet counts three times each week and erythrocyte counts weekly should be done to follow the patient properly with this agent and to estimate when therapy can be reinstituted.

The major advantage of TEM over HN_2 is the oral route of administration and the decreased incidence of nausea and vomiting. Although TEM may produce pronounced changes in the course of patients with Hodgkin's disease, it is neither as effective nor as predictable as HN_2 in this disease.^{82, 136, 114} In patients with lymphosarcoma and chronic lymphatic leukemia, the effectiveness of TEM more nearly approaches that of HN_2 . TEM is also of value

in the treatment of chronic myelocytic leukemia and mycosis fungoides.^{82, 136, 114, 168, 138, 126} It is of little aid in the arrest or palliation of carcinomas.^{168, 126}

3. *R-48: Beta-naphthyl-di-2-chloroethylamine*. This compound, which has been studied extensively in Great Britain,^{56, 103, 19} acts similarly to the nitrogen mustards. R-48 is inactivated by light and for adults is administered orally in divided doses for a total of 300 to 400 mg. daily, never to exceed 600 mg. per day. The dose for children is 100 mg. per day. A maintenance dose is apparently difficult to establish. Seventeen patients treated with R-48 have been reported.¹⁰³ Five patients had Hodgkin's disease, two reticulum cell sarcoma, two acute leukemia, three chronic myeloid leukemia, four chronic lymphatic leukemia, and one polycythemia vera. Nausea or gastric disturbances were slight or absent although vomiting did occur in two patients. Hemorrhagic cystitis with dysuria was noted on two occasions.¹⁰³ Protracted administration of R-48 might inhibit ovulation or endometrial proliferation. There were two instances of pronounced leukopenia in 11 courses of treatment in eight patients. Lymphocytopenia and thrombocytopenia occur. R-48 also acts on primitive, granulocytic forms in the marrow. R-48 will cause transient responses in the lymphomata with less nausea and vomiting than with HN₂. The best effects were observed in chronic lymphatic leukemia. Hematopoietic depression is the major toxic complication, as with HN₂, HN₃ and TEM.

4. *Hemi-sulfur mustard: 2-chloro-2'-hydroxydiethyl sulfide (HSM)*. This compound is reported to be one-thirteenth as toxic as HN₂.¹³¹ Intravenous administration in man was followed by nausea, vomiting, malaise and weakness. Ten patients of 31 treated with HSM were benefited.¹³¹ Eight of 13 patients with ascites presumably from peritoneal carcinomatosis showed a striking decrease in ascites formation for two to six months. There were no hematological changes with doses from 100 to 400 mg. repeated three or four times at one-day to four-day intervals. Thromboses or phlebitis of the vein occurred with each injection until the material was given through plastic tubing passed proximally into the vena cava from a peripheral site. Intention tremors of hands and fingers, noted in nine patients, subsided in one to two days after the last dose. Convulsions occurred in two patients.

II. MITOTIC INHIBITORS

1. *Colchicine*. Neoplastic cells can be altered and destroyed by colchicine but the doses required to produce such changes induce toxic effects^{112, 128, 94} which approach lethality. The regression of tumors following colchicine is probably due in large part to hemorrhages within the capillary blood supply⁹⁸ but

many further studies in man must be completed to evaluate colchicine properly.

2. *Podophyllin and podophyllotoxin*. Podophyllin, a plant extract composed of resins, has been used most effectively to remove condylomata acuminata by topical application. Within a few hours after podophyllin is painted upon the verrucous excrescences, degenerative changes in the area can be seen and within a few days the lesion will shrivel and disappear. Colchicine also acts topically like podophyllin upon condyloma acuminata.¹⁵⁰ MacCardle and Perrault,⁹⁹ investigating the action of podophyllin and its active principle, podophyllotoxin,^{149, 150} observed a neurological disturbance in fowl characterized chiefly by unsteady gait. Histological examination showed destruction of the cerebellar Purkinje cells. Parenteral administration of these substances in patients did not influence neoplastic disease favorably.¹³⁰

3. *Peltatins*: Leiter, Downing, Hartwell and Shear⁹³ further isolated a group of compounds from crude podophyllin and then synthesized various related congeners whose action simulated that of podophyllotoxin. One group of related compounds, termed *peltatins*, was investigated by Greenspan, Leiter and Shear⁵³ in mice transplanted with various neoplastic diseases. These compounds produced specific alterations in tumor cells which resembled those obtained with colchicine. The chemical formulae of podophyllotoxin and the peltatins are quite similar. Later 45 patients with various neoplastic diseases received alpha-peltatin, 0.1 to 0.5 mg. per kilogram of body weight intravenously. Although a few instances of transient regressions of lesions were observed, they occurred at dose levels which produced toxic reactions.⁵²

4. *Urethane: Ethyl carbamate*. Interest in the carbamate esters was revived by the studies of Templeman and Sexton¹⁵⁵ who confirmed the growth-suppressive findings of Lefevre.⁹² Soon thereafter Haddow and Sexton⁵⁷ demonstrated that ethyl carbamate (urethane) produced profound histological changes in tumors in mice and rats. Urethane is preferably given with meals in enteric-coated tablets, in capsules or in liquid form. Parenteral administration remains experimental and cannot be recommended.

Urethane is of value in the treatment of chronic myelogenous leukemia with peripheral leukocytosis.^{6, 71, 115} Doses of 1 to 4 gm. per day will result in a fall in the peripheral leukocyte count in two to four weeks, usually associated with generalized clinical improvement in about one-third of the patients so treated. A decrease in hepatosplenomegaly and lymphadenopathy are often observed although the decrease is less than that which occurs with x-radia-

tion or P³² therapy. The erythrocyte level usually remains unchanged although occasionally it will fall or, less often, rise. The platelet count is usually maintained.⁶ Urethane may serve as a useful therapeutic agent in this disease in the absence of x-ray P³² or GT-41.

Rundles reported benefit in nine of 16 patients with widespread multiple myeloma who received one or more courses of treatments.^{95, 127} The course of treatment was for eight to ten weeks in total doses of 120 to 290 grams in two months and repeated during an 18-month period for a total amount of 1,850 grams. Within two to four weeks after therapy was begun, skeletal pain and fever subsided, the hematological condition improved and the content of abnormal proteins in the serum became less or disappeared. Recalcification of widespread skeletal lesions has been observed in four to six months.¹²⁷ Accessible areas of skeletal involvement are best treated by x-radiation.

The exact mode of action of urethane upon neoplastic tissues is obscure but it has been reported that it is rapidly and completely metabolized within 24 hours and that the rate of breakdown is slower in tumor-bearing mice than in normal mice.¹⁰⁶ Urethane is a hematopoietic depressant and protracted daily administration can result in marrow hypoplasia with persistent leukopenia, thrombocytopenia and anemia. Gastric irritation with nausea and vomiting are common complaints with oral administration, but these conditions disappear promptly upon decrease in dosage or cessation of therapy. Blood studies at least twice each week are necessary for the proper control of therapy with this agent. The depression of the bone marrow elements is relieved slowly after cessation of therapy.

5. *Arsenic: Potassium arsenite (Fowler's solution)*. Arsenic is employed most effectively as potassium arsenite (Fowler's solution) in doses of 15 to 30 drops per day in the treatment of chronic myelogenous leukemia.⁴² Potassium arsenite inhibits mitosis at metaphase in a characteristic fashion similar to that of urethane but different from that of HN₂.⁵ Since protracted arsenical therapy is hematopoietically depressant and cumulative, frequent hematological examination is necessary when this agent is employed.

III. SUBSTANCES TOXIC TO CELLS

1. *GT-41: 1, 4, dimethane sulfonyl butane*. Following the demonstration that some sulfonic acid esters possessed radiomimetic activity,^{18, 58, 161} Galton⁴⁴ reported the effectiveness of 1,4-dimethane sulfonyl butane (GT-41) in myeloid leukemia. Three patients with chronic myelogenous leukemia were treated with 1,4-dimethane sulfonyl butane, 8 mg.

per day for four weeks for a total dosage of 200 to 250 mg. In all cases there was rapid clinical improvement during which the appetite was regained as well as strength, the enlarged spleen regressed in size, the hemoglobin rose and there was an accelerated decrease in primitive granulocytic leukocytes with an increase in mature forms in the peripheral blood.⁴⁴ GT-41 has been shown to reduce total leukocyte count, almost exclusively at the expense of the immature granulocytic forms. Accordingly, its clinical value lies in the hypercellular forms of chronic myelocytic leukemia. In the more fulminant forms of myelocytic leukemia with a preponderance of early immature granulocytes, the anemia and thrombocytopenia usually become progressively more severe despite a decrease in the leukocyte count. The effective dosage is 25 mg. daily for three to six days, and the decrease in leukocytes occurs within the next seven to ten days. Excessive dosage results in hypoplasia of the marrow with thrombocytopenia, anemia and leukopenia which may be fatal. Maintenance doses are difficult to establish.

2. *Diamidines: Stilbamidine and Pentamidine*. Stilbamidine[®] and Pentamidine[®] were introduced by Snapper¹⁴¹ as therapeutic agents for multiple myeloma. Many interesting reactions of the diamidines with cellular nucleic acids were observed.¹⁴² Clinical trials even in massive doses afforded temporary relief of bone pain in about half of the patients; the ultimate course of the disease was unaltered.^{48, 59} The recommended course of parenteral therapy is 100 to 150 mg. every other day for 15 doses, repeated after a two-week rest interval, for a total of 4 to 6 grams over a period of four to five months. Rapid intravenous administration may produce hypotension, dyspnea, paresthesias and signs of impending shock. Electrocardiograms may show pronounced changes suggestive of myocardial ischemia if the injection is too rapid.¹⁵

Approximately 25 to 50 per cent of patients receiving intramuscular or intravenous Stilbamidine have paresthesias, and hypesthesias along the fifth cranial nerve distribution during or shortly after protracted treatment. These facial paresthesias have persisted permanently in some patients.⁴⁸ Pentamidine is claimed to cause facial neuropathologic change and other toxic manifestations less often than does Stilbamidine. Since x-irradiation and urethane have shown much more favorable effects, the use of these diamidines for multiple myeloma is limited. Diamidines are not considered preferable to conventional analgesics for the relief of pain and they are more likely to cause untoward side reactions.

3. *Alloxan: Mesoxyl urea*. Brunschwig and Allen²¹ originally treated a patient with an islet cell tumor of the pancreas by intravenous administration of

alloxan.³⁴ Beneficial results with alleviation of frequent hypoglycemic episodes in that one case led to trials on other neoplasms and conditions with varying equivocal success.^{21, 153} Other investigators⁴⁰ using alloxan intravenously in carcinoma of the pancreas did not observe favorable changes.

4. *Antimony*: Antimony has been used previously to influence the course of neoplastic diseases³ and while the changes produced have not been dramatic, some alteration in the hematologic disorders have been reported.⁹⁷ More recently Rubinstein¹²⁵ employed Neostibosan® in the treatment of multiple myeloma with equivocal results.

The mode of action of antimony as a growth-suppressive is obscure but evidence indicates that it is closely related to that of arsenic.⁵¹

IV. ANTIMETABOLITES

The biological function of many essential metabolic substances may be antagonized by other compounds with closely related chemical structures. This antagonism between essential metabolites and their structural analogs may be utilized to interrupt specific cellular functions. In this manner sulfanilamide blocks the utilization of para-amino-benzoic acid by some bacteria, and scurvy can be produced in guinea pigs by the administration of gluco-ascorbic acid. Similar alterations in normal cellular enzyme metabolism may be produced by other vitamin analogs.¹⁶⁷

1. *Folic acid antagonists*. Of the metabolic antagonists which have undergone animal or clinical trial, the 4-amino derivatives of folic acid have shown the most pronounced effects upon neoplastic diseases.³⁹ Three closely related substances, 4-amino pteroyl-glutamic acid (Aminopterin®), 4-amino N¹⁰ methyl pteroyl-glutamic acid (A-methopterin®) and 4-amino pteroyl-aspartic acid (Amino-an-fol®), have received extensive trial in the leukemias in the past four years. Aminopterin and A-methopterin have produced pronounced alterations in the hematopoietic tissues with temporary remissions in 20 to 30 per cent of children with lymphatic leukemia.^{36, 37, 145, 157} The severe toxicity so frequently encountered with small to moderate amounts of these antagonists often necessitates discontinuance of the therapy.

The folic-acid antagonists are usually administered orally or intramuscularly in doses determined specifically for each patient. The usual dose of Aminopterin for children is 0.5 to 1.0 mg. daily; for A-methopterin it is 2 to 5 mg. daily in children and 5 to 10 mg. in adults parenterally or by mouth. For amino-an-fol it is 30 to 75 mg. per day intramuscularly—the smaller doses for children, the larger for adults. Adults tolerate Aminopterin less well than children on the basis of body weight. The dosage usually is gradually reduced and continued until mani-

festation of toxicity appears. Clinical improvement usually appears during the initial phases of the bone marrow depression. Macrocytosis, megaloblastosis and multilobulation of the neutrophils have been observed with small doses during Aminopterin therapy of leukemia in man and animals^{76, 156} and have been attributed to the production of folic acid deficiency.⁷⁸ Hematopoietic depression of the blood and marrow elements may progress to complete aplasia if the dosage is not discontinued or promptly reduced. If therapy is protracted, other more systemic toxic signs soon appear—ulcerations of the entire gastrointestinal mucous membranes from the mouth to the anus, associated with diarrhea, hemorrhage, weakness and anorexia. Alopecia and skin eruptions of many varieties may occur during therapy, but these conditions are ameliorated when use of the drug is discontinued.²⁴

The acute signs and symptoms of toxic reaction to therapy with folic acid antagonists may be partly ameliorated by the administration of folic acid, or folinic acid (citrovorum factor).^{143, 154, 166} Large doses of these substances will completely override the antagonist. In children the course of leukemia is most often rapid, and approximately 90 per cent of cases are of the lymphatic type.¹¹ The natural history of untreated lymphatic leukemia in children is characterized by a variable course of two to 16 months with an average of 5.6 months. Supportive therapy with blood and antibiotics will increase the average survival to 8.9 months. This is about equal to the mean life span of children treated with hormones or antagonists in addition to support with blood and antibiotics.¹¹

In a four-year period, 311 patients with acute leukemia were treated with folic acid antagonists by the Farber group.³⁸ Of these, 243 were treated for three weeks or longer. Approximately two-thirds of the 243 are reported to have responded favorably to these compounds. The mean survival of the 311 patients was calculated to be nine months. However, of the patients treated for three weeks or longer, 58 or 18.6 per cent survived more than 12 months; 39 or 12.1 per cent survived more than 15 months; 26 or 8.3 per cent more than 18 months, and seven or 2.2 per cent more than 29 months. Of the seven who lived more than 29 months, five were alive at the time of report. With the exception of the five living children, the remainder of 243 patients treated for three weeks or longer sooner or later reached a point at which the folic acid antagonists were no longer effective. The citrovorum factor had no value in the prevention or treatment of toxicity which could not be equalled by careful administration of the antagonists alone.

Farber and co-workers reemphasized that the remissions were temporary, that the compounds were

toxic, that there was no evidence that would justify the term "cure" of acute leukemia in children, and that value of these compounds is still limited to research. However, it must be considered that definite prolongation of life occurred in some members of the group treated. Both intermittent and continuous administration of the antagonists have been employed and in some instances the addition of corticotropin (ACTH) or cortisone to the regimen has been of great aid as concerns the comfort of the patients, and perhaps in further prolongation of life.^{69, 120}

2. *Adenine antagonist: 2,6-diaminopurine.* Burchenal and co-workers^{23, 25} studied an adenine antagonist, 2,6-diaminopurine, and found this compound to prolong the life of leukemic mice. Clinically, however, the drug was inconsistent in action and ineffective when employed in patients with acute leukemia.

3. *Guanine antagonist: 8-azaguanine.* Similarly 8-azaguanine (Guanazolo[®]), a guanine antagonist, was ineffective in clinical trials although it inhibited a mammary carcinoma EO771 in mice.^{4, 86} This compound when administered orally to patients with various neoplastic diseases in doses of 50 to 100 mg. per day for 10 to 14 consecutive days caused diarrhea and marked erythematous excoriations of the skin.⁴

Combined treatment with Guanazolo plus Aminopterin, Guanazolo plus alpha-peltatin, and Aminopterin plus alpha-peltatin had an additive inhibitory action upon a transplantable mouse leukemia (lymphoma 1210), without extra toxicity.^{49, 50} Combinations of 8-azaguanine with an antiriboflavin compound or with stilbestrol caused tumor inhibition in mammary adenocarcinoma of mice.^{43, 132}

4. *Pyridoxine antagonist: Desoxypyridoxine.* In mice and rats, inhibition of growth of transplantable tumors while the animals were receiving pyridoxine-deficient diets was observed.⁸⁷ The addition of desoxypyridoxine to the deficient diet slowed the growth of a transplanted lymphosarcoma in mice.¹⁴⁶ Clinical trials in acute leukemia and lymphosarcoma, however, were without favorable effect.⁴⁷

5. *Para-amino-benzoic acid (PABA).* Zarafonitis and co-workers¹⁷¹ found that leukopenia occurred following protracted administration of large doses of para-amino-benzoic acid and that it was relieved promptly upon cessation of therapy.¹⁷² High content of the drug in the blood can be maintained with doses of 2 to 4 grams every two hours. Profound and consistent but transient hematopoietic effects were observed in chronic myelogenous leukemia more frequently than in chronic lymphatic leukemia.

6. *Riboflavin inhibitors: Galacto-riboflavin and Iso-riboflavin.* Galacto-riboflavin and Iso-riboflavin

will suppress the growth of some animal tumors on riboflavin-deficient diets both in vitro and in vivo.^{35, 147}

7. *Melanin antagonist: Mono-benzyl ether of hydroquinone.* Oliver and co-workers¹¹¹ reported the depigmenting properties of a compound while studying the cause of skin changes in workers from a commercial rubber manufacturing plant. The causative material, mono-benzyl ether of hydroquinone, interferes with the normal melanin metabolism. Hence it was employed in investigations to influence malignant melanomas. Kelly and co-workers⁸⁵ treated nine patients with malignant melanoma with large oral doses of this substance. The patients were closely observed and chemical and cytologic studies of the blood and examination of biopsy material were carried out frequently. No significant or consistent favorable alteration of the natural course of the disease was observed.

V. ENDOCRINE SUBSTANCES

Hormonal therapy of advanced mammary cancer is arrestive or palliative but not curative under any conditions.^{54, 107, 163} Only five types of neoplastic disease are altered by hormonal therapy—lesions of the breast, prostate, uterus, lymphatic and hematopoietic systems. Roentgen therapy is most advantageous for arrest or palliation when metastases are localized and accessible yet beyond the scope of surgical treatment.⁴⁵ Hormonal therapy is preferable for widespread soft tissue, visceral or osseous metastases.

Approximately 25 per cent of patients with advanced neoplastic involvement from carcinoma of the breast will benefit objectively from therapy with estrogenic or androgenic hormones.^{30, 107} Extensive clinical experience has been attained with two androgens, testosterone propionate and methyltestosterone, and with six preparations of estrogens, diethylstilbestrol, ethinyl estradiol, estradiol dipropionate, dienestrol, dimethyl ether of diethylstilbestrol and Premarin.[®] Postmenopausal women respond much better to estrogens than premenopausal women, and the best results are obtained in patients who are more than five years postmenopausal. The functional state of the ovaries apparently has little effect on the response to testosterone propionate. In the premenopausal and menopausal patients, estrogens and androgens are about equally effective in soft tissue lesions resulting from carcinoma of the breast, but in postmenopausal patients estrogens are superior to testosterone propionate. Occasionally acceleration of the disease occurs during hormonal therapy, most frequently in the menopausal or premenopausal patients receiving estrogens. Therefore, castration (if not contraindicated) and androgens are the treat-

TABLE 2.—Steroid Hormones of Value in the Treatment of Advanced Mammary Cancer

ANDROGENS:	Route	Dose schedule preferred		Minimal total dose
		Mg.	Daily Weekly	
Testosterone propionate.....	Intramuscular	50-100		3 gm/3 mo.
	Buccalet	40- 60	1	3-5 gm/3 mo.
Methyltestosterone.....	Oral	200	1	30 gm/6 mo.
Methylandrostenediol.....	Intramuscular	100-200		4-7 gm/3 mo.
ESTROGENS:				
Diethylstilbestrol.....	Oral	15	1	2-4 gm/3-6 mo.
Ethinyl estradiol.....	Oral	3	1	200 mg/3-6 mo.
Estradiol dipropionate.....	Intramuscular	5	2	200 mg/3-6 mo.
Dienestrol.....	Oral	15	1	4 gm/3-6 mo.
Dimethyl ether of diethylstilbestrol.....	Oral	30	1	4 gm/3-6 mo.
Premarin.....	Oral	30	1	4 gm/3-6 mo.
TACE (tri-para-anisyl chloroethylene)....	Oral	24	1	Investigative stage: to be determined

ments of choice for soft tissue lesions in the premenopausal patient. Testosterone propionate is more effective than estrogens in relieving subjective bone pain although there is little difference, objectively, between the two steroids with respect to recalcification of the osseous lesions.

1. *Androgens: Testosterone propionate, methyltestosterone and methylandrostenediol (MAD).* Testosterone propionate, 50 mg. three times each week, intramuscularly, is as effective as the previously recommended dosage of 100 mg. three times each week. Daily, frequent dosage orally or by buccal absorption may be employed as an adjunct to intramuscular administration but the equivalent dosage must be absorbed, and this is usually more expensive by the oral than by the parenteral route.^{30, 107} Pellet implantation permits uniform absorption of androgens or estrogens^{16, 137} and in adequate amounts will often suffice for two to three months. Hormonal therapy should be continued until definite progression of the disease resumes. Cessation of therapy may then cause another regression; and regression may also occur if a change is made to another hormone. The response to the hormones is temporary. Each eventually becomes ineffective. Some investigators feel, therefore, that the hormones should be administered intermittently, preferably cyclically, and that furthermore they should be employed sparingly to avoid premature exhaustion of the therapeutic armamentarium. On the other hand other authorities feel the hormones should be continued as long as response is favorable.

Combined androgen and estrogen therapy in patients with advanced mammary cancer is at present under trial but conclusions cannot yet be drawn.

Recently, Homburger and co-workers⁷³ reported favorably on the effects of methylandrostenediol, an androgen said to exert the characteristic anabolic activity of testosterone without the masculinizing accompaniments.

Kasdon and co-workers⁸³ reported subjective improvement in 30 of 40 patients with advanced mammary cancer treated with methylandrostenediol (MAD) administered orally, subcutaneously and by pellet implantation. In nine of the 30 there was objective evidence of improvement. Hypercalcemia, the only major side effect observed, occurred in three patients with extensive osteolytic metastases. Segaloff and his associates¹²⁹ reported similar although not so encouraging observations in 24 cases. Only two of the patients, both with soft tissue lesions, had objective regression of lesions after intramuscular administration of 300 to 700 mg. of MAD per week. There was no beneficial effect on metastases in any patient in the series.

The dosage of this androgen is approximately twice that of testosterone propionate. There has been less clinical experience with methylandrostenediol than with the older testosterone preparations, but results of recent clinical investigations with this non-virilizing androgen are encouraging.

2. *Estrogens.* The first six estrogens listed in Table 2 are considered to exert similar activity when given in equivalent dosage. Frequently, however, some preparations are better tolerated than others. Also, a change from the oral to the parenteral route of administration may significantly ameliorate the undesirable side effects. The fact that patients with metastatic mammary cancer respond similarly to either estrogens or androgens suggests a common metabolic utilization of these compounds.

More recently a new substance, Tri-para-anisylchloroethylene (TACE), has been reported as a potent estrogen without the undesirable feminizing side effects. Its value in the treatment of advanced prostatic cancer has been suggested^{140, 152} but more clinical confirmation is needed before TACE can be recommended.

Patients with advanced carcinoma of the prostate can be benefited by the administration of estrogens.^{60, 74, 109} In a study of 100 consecutive cases of

carcinoma of the prostate, Harrison and Poutasse⁶⁰ found that the most effective hormonal treatment of carcinoma of the prostate was orchiectomy combined with estrogenic therapy. Seventy per cent of patients with extensive carcinoma of the prostate had symptomatic and objective improvement with this form of therapy.

All known effective measures should be instituted as soon as possible. It is desirable to reduce the androgen predominance, and there is much controversy as to whether castration, or estrogen administration or both are the preferred courses of action. In general it is felt that orchiectomy followed by prolonged oral administration of 5 to 10 mg. daily of stilbestrol or an equivalent estrogen is most effective. Since the psychological barrier of orchiectomy often is difficult to overcome, many patients are treated with estrogens alone, often with good results. The estrogens may also be administered intramuscularly, or pellets may be implanted. Approximately 75 per cent of patients so treated show subjective and often objective improvement as judged by subsidence of pain, return of appetite, gain in weight and strength, decrease in size and hardness of the prostate, relief of urinary obstruction and roentgenographic evidence of disappearance of metastases to bones. Although the regressions are temporary, there is now evidence that definite prolongation of life has been achieved.

The toxic complications with estrogens—edema, hypercalcemia, menorrhagia and metrorrhagia—are related particularly to large doses given over long periods. At least eleven instances of carcinoma of the breast have occurred in men treated with estrogens for two or more years for carcinoma of the prostate, although the association has been contested.²⁶ Castrodale, Bierbaum, Helvig and MacBryde²⁷ noted pronounced hematological and hepatic changes following prolonged administration of estradiol and stilbestrol in dogs, characterized primarily by thrombopenia with fatal hemorrhages.

Frequently nausea and vomiting occur during estrogen therapy, and although these reactions may abate after one to two weeks of therapy it is often necessary to discontinue treatment because of them. Reducing the dosage, substituting other estrogens or changing to parenteral administration may alleviate gastrointestinal distress.

The toxicity of androgens is evident after protracted administration and large dosage. In women, masculinizing and other changes appear within a few weeks—changes such as hirsutism, hoarseness, increased firmness of the musculature, increased libido, amenorrhea, water retention and hypercalcemia.³⁰ Upon cessation of therapy these conditions gradually subside. A salt-poor diet will often prevent water retention.

3. *Progesterone*. Large doses of progesterone (250 mg. daily) intramuscularly are reported by Hertz⁶⁷ to be associated with a decrease in size, vascularity and friability of lesions of carcinoma of the cervix. The changes are not sufficient, however, to recommend progesterone as a therapeutic agent in carcinoma of the cervix at this time.

4. *Corticotropin (ACTH)*. The pituitary adrenocorticotrophic hormone is available in single sterile ampules of 25 mg. The dosage varies widely depending upon the desired goal. Intramuscular doses of 50 to 200 mg. per day in two or three divided doses are most commonly employed.^{121, 159} Intravenous administration of corticotropin (20 mg. daily) is comparable to intramuscular administration of five to ten times that amount and is therefore more economical.¹²² Slow infusion increases the adrenal cortical response to a given dose of the hormone. The side effects are analogous to those that occur when corticotropin or cortisone is administered by other routes.

5. *Cortisone: 17-hydroxy-11-dehydrocorticosterone (Compound E)*. Cortisone is the name coined by Kendall to identify 17-hydroxy-11-dehydrocorticosterone, or "Kendall's Compound E."¹⁰² Cortisone is considered a growth-suppressive.^{35, 62, 143} In some cases of neoplastic diseases in which this material was used there were definite although mostly subjective, slight and transient effects.^{66, 75, 116} The intramuscular dose ranges from 25 to 100 mg. per day, usually given once or twice a day. Oral administration is equally effective in identical doses if taken daily in three to four equally divided doses.¹⁶⁰ Corticotropin and cortisone probably reduce the tissue reaction to neoplasms with little or no favorable effect on the cancerous process itself.¹⁵⁹

The effects and complications of corticotropin and cortisone are identical as far as can be ascertained today and are ascribable directly or otherwise to their metabolic or endocrine functions.^{144, 159} It should be emphasized that corticotropin causes adrenal cortical hypertrophy and cortisone is associated with cortical atrophy. The unfavorable effects of corticotropin and cortisone occur with prolonged administration of large doses and are identical with the symptoms of hypercorticism (Cushing's syndrome)^{1, 66, 144} which include impairment of carbohydrate tolerance, weakness and wasting of muscle, osteoporosis, striation of the skin, bruising tendency, rounding of the facial contours, acne, hirsutism, alkalosis, loss of gonadal activity, psychoses and hypertension.

Cortisone and corticotropin have been observed to produce striking changes in hematological dyscrasias.^{159, 165} Favorable responses occur initially in about 50 per cent of patients with acute lymphatic leukemia, can seldom be repeated in the same patient

with repeated courses of therapy, and, as with other hormonal substances, loss of tolerance rapidly appears after the first or second course of therapy.

To attain therapeutic results in the lymphomas and leukemias the dosage often must be forced until at least some part of the Cushing syndrome appears. Most of this syndrome will regress quickly but often not completely following discontinuance of the therapy. The appetite which becomes voracious during corticotropin or cortisone administration will subside promptly upon cessation of treatment. Prolonged metabolic changes such as the development of diabetes mellitus, malignant or benign hypertension, peptic ulceration, cardiac failure and permanent psychotic changes have not been reported.⁷⁰ Corticotropin and cortisone may depress the natural immunological processes in infections, resulting in enhancement of susceptibility and increased severity.⁸⁴

6. *Para-hydroxy-priopiophenone*. This material has been reported by Buu-Hoi to exert pituitary-like effects and in clinical trials it is stated to have brought about temporary remissions in the course of various neoplastic diseases.^{41, 117} Preliminary trials with this material (H365) in this country have not given any indications to date that would confirm the findings of the French investigators.

VII. BIOLOGIC AND BACTERIAL PRODUCTS

1. *Shear's polysaccharide*. The occasional regression of neoplastic lesions following infections and the administration of Coley's toxin to patients with advanced neoplastic diseases stimulated interest in similar biologic products.¹⁰⁸ Shear and co-workers purified preparations from *Bacillus prodigiosus* (*Serratia marcescens*) and obtained a group of polysaccharides¹³³ containing phospholipid and nitrogen fractions which decreased with greater purification. The material was administered intravenously in doses of 5 to 15 micrograms. Within 45 to 60 minutes fever, leukocytosis and hypotension occurred, with shock and occasionally death.^{20, 72, 110} Temporary tumor regression was observed occasionally, associated with transient clinical improvement. Creech and co-workers employed newer polysaccharide preparations with similar results.³² The substance is pyrogenic in man and produces hemorrhages within the tumors of both mice and man. The effect of the polysaccharides is primarily upon the vascular supply, related to systemic toxicity, and not directly upon the tumor cells.²

2. *Lymphokentric and myelokentric acids*. In 1939, Miller, Wearn and Heinle¹⁰⁵ reported the isolation of crude substances from the urine of leukemic patients which stimulated myelopoiesis and lymphopoiesis in animals. They named these sub-

stances lymphokentric and myelokentric acids. Eight patients with lymphoblastic leukemia were treated with myelokentric acid with equivocal changes and a suggestion of partial remissions.¹⁰⁴ Swan and Zelman observed similar phenomena in a patient with acute lymphoblastic leukemia treated with myelokentric acid.¹⁵¹

3. *Rabies vaccine*. Two of twelve patients with malignant melanoma treated with rabies vaccine had some regression of metastatic nodules without microscopic cellular alterations.¹¹³ A later report⁶⁸ indicated that eight of thirty patients had definite regression of metastases and the authors felt that the development of new metastases was also retarded.

VII. OTHER AGENTS OF RECENT INTEREST

1. *Krebiozen*. Krebiozen is a substance reported to be derived from the blood of horses which have been inoculated with a stimulating material the nature of which has not been disclosed as yet.⁷⁷ By another process (also undisclosed) approximately 1.0 mg. of a white powder is obtained which is then diluted in distilled water for intramuscular administration. Although it has been specifically stated that Krebiozen is not antitreticular cytotoxic serum (ACS) the approach is quite similar.¹⁷ Extensive studies on neoplasms in mice, rats and dogs treated with Krebiozen by the Chicago group elicited no objective evidence of any effect upon these tumors.

Initial investigations upon 22 patients with various neoplasms were stated to show decrease in size of a lymphosarcomatous lesion in the breast of a 52-year-old woman and some decrease in nodes of a patient with Hodgkin's disease. Changes in the remaining 20 patients⁷⁷ were within the natural variation of neoplastic illnesses.

In studies in other laboratories on the use of Krebiozen in 100 patients with a wide variety of neoplastic diseases, no significant alteration in the course of the disease was noted in 98 cases.³¹ In the other two patients transient changes occurred which were considered significant but within the natural variation of the specific disease. It must be concluded that the substance termed Krebiozen has not to date been shown capable of favorably influencing the neoplastic diseases studied, that the original claims concerning Krebiozen are without substantiation^{31, 123, 164} and that the material cannot be recommended for use as a tumor chemotherapeutic agent at this time.

2. *Antitreticular cytotoxic serum (ACS)*. Bogomolts and his associates^{17, 101} obtained a material from the blood of horses following the injection of human spleen and bone marrow tissue which, they reported, caused disappearance of metastases in lymph nodes and prolongation of life in inoperable cancer. The

substance was termed antireticular cytotoxic serum (abbreviated to ACS) and was proposed as an adjunct in the therapy of cancer to prolong useful life by causing regression of metastases, alleviation of pain and increase of appetite.¹⁷ In neither clinical nor animal investigations in this country have such specific effects been observed upon benign or malignant tumors in mice, rats or man.^{33, 63, 64, 65, 139}

3. *K-R: Klyueva-Roskin vaccine.* This water soluble, heat-stable endotoxin derived from *Trypanosoma Cruzi* was reported to cause regressions in both animal and human neoplasms.⁸⁹ Although a report by Malisoff¹⁰⁰ contained favorable implications, other more intensive studies by Cohen, Borsook and Dubnoff²⁸ in vitro and by Hauschka in vivo⁶¹ in mice did not confirm the original claims. No reports upon this material have appeared recently.

4. *Chymotrypsin.* Independent clinical investigations by two groups^{134, 162} employing chymotrypsin⁹¹ have failed to confirm the original claims made by Krebs and co-workers.^{55, 90} Serious reactions were observed in four of ten patients treated over a protracted period, one of whom almost died following anaphylactoid reaction to an injection. No further authentic substantiation of the claims made for this material have appeared since. Chymotrypsin cannot be recommended as an effective agent for tumor chemotherapy.²⁹

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A Change in VA Report on Patients

VETERANS ADMINISTRATION's monthly "Statistical Summary of VA Activities" no longer distinguishes between non-service and service connected patients in VA hospitals. Previous summaries indicated that approximately two-thirds of the patients were non-service connected cases, but the current summary gives no indication what percentage of the 98,517 patients are in this category.—*From the A.M.A. Capitol Clinic.*

CASE REPORTS

- Anterior Sacral Meningocele
- Scleromalacia Perforans
- Perineal Myoma

Anterior Sacral Meningocele

JOHN D. BRIGGS, M.D., and
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ANTERIOR SACRAL MENINGOCELE is a herniation of the meninges through an anterior defect of the sacrum, forming a cyst-like structure filled with spinal fluid which is continuous with the subarachnoid space of the spinal cord. Fewer than fifty cases have been reported in the literature since the original description of this congenital anomaly by Bryant in 1837 (cited by Collier and Jackson²). In many of the reported cases, meningitis followed surgical procedures directed at the diagnosis or treatment of the lesion.

CASE REPORT

A 36-year-old white male mail carrier was admitted to the Veterans Administration Hospital, Los Angeles, September 22, 1948, with complaint of a tumor in the rectum. Five weeks before admittance he fell from a ladder and, in the belief his "coccyx was broken," two days later consulted a physician who noted a non-tender, spongy mass between the rectum and sacrum. He was examined by another physician who was unable to arrive at a definite diagnosis but advised incision and drainage in the belief that the lesion was either a hematoma or an abscess. For the preceding several months the patient had noted slight, sharp, stabbing pain associated with defecation. No material drained from the rectum and no bloody or tarry stools were passed.

Ten years before admittance the patient had had an injury to the left hip, and x-ray films of the pelvis were taken at that time. The films were not available but the report stated: "There is deformity of the distal end of the sacrum with absence of the coccyx and lower sacral vertebrae forming a half-moon shaped border. This is probably congenital but could be postoperative formation and is merely noted as being present."

Upon physical examination, the only abnormalities noted were in the rectum. There was a smooth, firm, non-tender, rubbery, rounded mass, 8 to 10 cm. in diameter, palpable between the rectum and the hollow of the sacrum. No pulsation was felt and no bruit could be heard on auscultation. In proctoscopic examination the mass was observed to be encroaching on the lumen of the rectum. The overlying



Figure 1.—X-ray of the pelvis showing the typical "scimitar" appearance of the sacrum with absence of the coccyx.

mucosa was not involved. No neurological abnormalities were noted.

Results of examination of the blood, of urinalysis, and of a serological test for syphilis were within normal limits. No abnormalities were noted in an x-ray film of the chest. In roentgen studies with a barium enema, slight deviation of the pelvic colon was noted, and in a film of the pelvis congenital absence of the lower portion of the sacrum and coccyx was observed (Figure 1).

The diagnosis was still in doubt when the patient was taken to the surgery for excision of a biopsy specimen from the mass. Spinal anesthesia was used and the specimen was obtained through an incision in the midline, cephalad from the anus. A clear fluid was aspirated from the mass, and as it was withdrawn the tumor decreased in size as determined by rectal palpation. The incision was closed without placement of drains.

In microscopic examination of the aspirated fluid, 6 erythrocytes and 2 lymphocytes per cubic millimeter were noted. The fluid contained no globulin; the sugar content was 76

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mg., total protein, 29 mg. and chlorides 610 mg. per 100 cc. Results of Wassermann and gold curve tests for syphilis were negative.

The wound healed satisfactorily and the patient was discharged without further treatment.

When the patient was last observed, September 11, 1951, the symptoms were essentially the same as at the time of admittance three years before, and the meningocele did not appear to have increased in size.

DISCUSSION

The symptoms of anterior sacral meningocele are primarily owing to the mechanical effects of a pelvic tumor. Constipation and pain on defecation often are present. Serious obstetrical problems may arise because of partial occlusion of the birth canal. Occasionally minor nerve defects may be associated with the condition. Frequently symptoms are not pronounced and the tumor is found unexpectedly, as in the case presented here. Other congenital defects are often associated with this lesion.³ Tumors of this kind occur more often in females than in males.

The diagnosis should be suspected when a tumor of the posterior pelvis is associated with a sacral defect. Sherman, Caylor and Long⁵ observed that there were sacral defects in 23 of the 34 cases they reviewed. In many of the older reports, roentgen examination was not made and a sacral defect may have been present but overlooked. In the absence of a demonstrable sacral defect, the diagnosis must be confirmed by a myelogram or by aspiration of the tumor. It is important that aspiration or incision of the mass not be made through the rectum or vagina; meningitis developed in all of nine patients in the cases in which entrance was made by those routes, and seven of them died.⁵ In the present case, unfamiliarity with the lesion was the reason for inability to make the proper diagnosis without surgical exploration and aspiration.

Surgical procedures performed in the diagnosis and treatment of these lesions have been accompanied by a high mortality rate. A course of "skillful neglect" has been advised, with the performance of cesarean section if sacral meningocele occurs as a complication of pregnancy.⁵ Surgical ligation of the pedicle, which is often quite small, as it emerges through the sacral defect has been performed successfully several times and is the procedure of choice if it is decided that surgical removal is indicated.^{1,2,4,6} The removal of the sac is optional since it does not secrete spinal fluid. The posterior approach to the lesion is attended with fewer hazards and complications. Since the patient in the present case had minimal symptoms which did not increase in three years, surgical excision was not carried out.

SUMMARY

A case of anterior sacral meningocele is presented.

The dangers associated with methods of approach that are not strictly aseptic, either for diagnosis or treatment of this rare lesion, are outlined.

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Scleromalacia Perforans

ORWYN H. ELLIS, M.D., and
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DISEASES OF THE SCLERA are among the most serious diseases of the eye because of the complications which may occur.

Classification of the diseases of the sclera is made upon anatomic and clinical observations because knowledge of what causes them is limited. The case here reported was particularly hard to classify. It could not be placed in a textbook classification until several months after onset. Even then all the facts did not completely fit into place. The rarity of the various forms of scleritis makes it important that each case be thoroughly studied and reported, in the hope that sufficient information will be amassed in the literature to permit significant etiological conclusions.

Frequently observed is the disease entity nodular episcleritis,¹ and occasionally a form of superficial scleritis called by Fuchs episcleritis periodica fugax. The former is described as a chronic recurrent nodular inflammation of the episcleral tissue, usually bilateral. The latter and more regularly recurrent form is considerably more diffuse with edema and congestion of the tissues which is not present in the more benign cases. These superficial forms are not understood etiologically any better than the deep forms, but they rarely constitute a threat to the eye.

Deep scleritis has been divided clinically into anterior and posterior scleral inflammations. All cases of scleritis are chronic in character and in many one or more complications develop, such as sclerosing keratitis, and/or uveitis with sequelae such as anterior and posterior synechia, iris bombe, vitreous exudates, choroiditis, secondary glaucoma and panophthalmitis. Each complication may gravely threaten the sight and even the retention of the globe itself.

Posterior scleritis is usually associated with tenonitis and is most often secondary to retrobulbar infection extending from the sinuses. The chemosis and frequent concomitant occurrence of retrobulbar neuritis are so severe that not infrequently enucleation becomes necessary.

Anterior scleritis occurs as one of four separate clinical entities: Annular scleritis, scleroperikeratitis, brawny scleritis and scleromalacia perforans. Duke-Elder² described these diseases as separate and not necessarily related diseases. Indeed, each has definite characteristics not present in the others. These characteristics may be found, however, to be only the special reactivity of the area involved and probably have nothing whatever to do with etiologic factors. Proper reclassification of these diseases clinically must await further pathologic and physiological studies.

Annular scleritis is usually a diffuse induration of the circumference of the anterior segment of the sclera; that is, that portion of the globe in front of the equator. There are usually present pin-head sized, hard, white nodules in the sclera. Necrosis is unusual on a gross scale but it may be

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noted in microscopic examination of an enucleated eye. Scleritis of this type is frequently followed by or associated with deep infiltrations in the cornea, and when this occurs the disease is called scleroperikeratitis.

Brawny scleritis is a much more virulent disease clinically. The sclera, episclera and conjunctiva take on a brawny, gelatinous appearance. There is a true pitting edema of the globe. Never in a case of this type has degeneration been reported to have extended posteriorly beyond the equator. Histologically, degeneration is found in the sclera but nodules are not present and ulceration does not occur.

Scleromalacia perforans was first described as a specific disease by Van der Hoeve⁹ in 1931, and in 1934¹⁰ he reported four cases in which characteristic holes occurred in the sclera. These holes developed slowly. Occasionally a yellow nodule appeared which, upon puncture, exuded a yellow granular detritus. Three of the four cases occurred in association with polyarticular rheumatism.

Smolero¹¹ reported the presence of areas of focal necrosis of the sclera in three cases of rheumatoid arthritis.

Edstrom² reported a case in which flat grayish nodules occurred in the sclera. The nodules consisted of granulomatous tissue with necrotic connective tissue in the center. Results of culture and guinea pig inoculation of material from the nodules were negative for tuberculosis. The patient had severe arthritis, and the result of an agglutination test was positive for a hemolytic streptococcus.

Up to 1938 there had been 14 cases reported with several others of questionable classification. Verhoeff and King¹¹ added a case to this list and reviewed all the preceding cases from the available information. They formulated a composite clinical description as follows:

The disease may occur in one or both eyes simultaneously or at intervals in patients in the 5th, 6th and 7th decades of life. Present usually are slightly elevated nodules which involve the sclera and overlying tissues. These nodules may occur in the sclera from the limbus to the equator. The congestion is most often only moderate and is limited to the nodules and their immediate vicinity. After several months the nodules regress, leaving shallow concavities. When the nodule is at the limbus it may perforate into the anterior chamber. Actual rupture of the globe is uncommon. Evidence of intraocular infection is slight unless purulent infection occurs. Posterior synechia or cataract may develop. In most cases rheumatoid arthritis exists at the onset of scleritis.

In most cases the disease is associated with rheumatoid arthritis, but not in all. Oast⁷ reported a case which was identical clinically and pathologically with the case described by Verhoeff but in which there was no arthritis.

REPORT OF A CASE

A 59-year-old Mexican male whose right eye had become inflamed three weeks previously was first examined in June 1949. He was illiterate, lived out of town and returned irregularly to the outpatient department for treatment. Mild injection of the bulbar and palpebral conjunctiva of the right eye was noted. No discharge, follicles or papillae were observed and no preauricular adenopathy was present. There were a few pin-point areas of staining on the right cornea. The ocular media were all clear and both fundi were normal. The visual acuity was 20/70 in the right eye and 20/30 in the left. Each eye was correctible to 20/20 with concave lenses. No evidence of scleral disease was noted on gross or slit-lamp examination. No other significant abnormalities were observed in a complete physical examination.

The eye was treated with 30 per cent sulfacetamide solution locally for two weeks without improvement. After two weeks (five weeks after the right eye was affected) the left eye became involved. During the first week that both eyes were involved some episcleral injection developed in an area 6 to 8 mm. wide surrounding the whole circumference of the limbus in both eyes. The ocular media remained clear and the vision was not diminished. A tentative diagnosis of episcleritis was made and the patient was given salicylate therapy and local application of heat.

The patient returned to the clinic July 5 because of increased pain and tenderness in each eye. There was a 2 mm. by 4 mm. punched-out ulcer in the indurated conjunctival tissue at the 12 o'clock position in each eye. These ulcers had a yellow necrotic base and extended to the cornea. The patient stated that the ulcers had been preceded by yellow nodules. He was hospitalized for further study.

No new information regarding the eyes was elicited by detailed questioning. The patient had been in good general health until two years previously. During this two-year period he had received intermittent therapy by his family doctor for pain in the ankles, knees and shoulders. Salicylate treatment in large doses for arthritis had been given for two months prior to the onset of the eye disease, but had caused so much gastric upset that it had to be discontinued.

Except for the eyes, no abnormality was noted in physical examination. There was no swelling, tenderness or limitation of motion of the joints. Results of all laboratory tests at the time of admittance, including serologic tests for syphilis, were within normal limits. No evidence of disease was noted in an x-ray film of the chest. The uric acid content of the blood was 4.2 mg. per 100 cc. The reaction to a skin test with 0.01 mg. of old tuberculin was negative at the end of 72 hours, and to 0.1 mg. of the substance was 1 plus in 48 hours. The result of a Frei test was negative. Coagulase-negative staphylococci were noted in smears and cultures of material from the conjunctiva of each eye, but no abnormal cells were seen on smears. Normal conjunctiva covering a non-specific granulomatous process was observed in biopsy specimens taken from each ulcer.

X-ray films of the knees and ankles showed slight irregularity of both malleoli and some hypertrophic fringing, of long duration, of the margins of the articular surfaces of the tibial spines of both knees.

For two days after the patient was admitted to hospital the temperature was elevated one degree (Fahrenheit) at 4 p.m. but remained normal thereafter except when fever therapy was given.

The ulcers slowly became larger and deeper. The wounds made in excision of material for biopsy did not heal. The area of induration enlarged to 10 mm. back of the limbus in each eye. The patient was given 3.5 million units of penicillin, 30 gm. of streptomycin, and for four days was given therapeutic dosage of sulfadiazine in conjunction with local application of sulfathiazole and sulfacetamide, in succession or combination, without effect on the course of the disease.

When it became evident that the biopsy wounds were not healing, the ulcers were treated with a thermophore. Although this therapy stimulated some healing, it had to be discontinued because of a temporary rise in intraocular tension to 60 mm. of mercury (Schiotz).

After the patient had been under treatment for two months mild uveitis developed. It responded to foreign protein therapy with typhoid antigen, but the treatment had no effect on the scleritis. Operation to cover the ulcer in the right eye with a conjunctival flap was carried out. A specimen of diseased episcleral tissue was removed for guinea pig inoculation and the remaining episcleral tissue was cauterized with heat. A conjunctival flap was placed over

the entire ulceration and cornea of the right eye. Both eyes then began to improve. The patient was discharged from the hospital on November 1, 1949. No symptoms developed in the inoculated guinea pig, and when it was examined at the end of six weeks, no evidence of tuberculosis was noted.

A month after the patient was discharged, two firm, yellow scleral nodules which caused some discomfort appeared on the right eye, 10 mm. from the limbus. One was 3x6x1 mm. and the other 3x3x1 mm. The ulcer of the left eye was shallow and partially healed at the limbus. In January 1950, about six months after the onset of the condition, there was a recurrence of uveitis in both eyes. Reaction to a skin test at that time with 0.1 mg. of old tuberculin was again 1 plus in 48 hours. The uveitis improved and the patient was discharged after three weeks. In February the patient complained of pain in the chest and productive cough with some fever. In an x-ray film of the chest taken February 7 no evidence of active disease was noted. The patient was readmitted to the hospital in March, and an x-ray film then gave evidence of pneumonitis in the base of the right lung. The sedimentation rate was greatly accelerated. A culture was positive for *Mycobacterium tuberculosis*. The patient was transferred to a tuberculosis sanitarium in April. At that time both eyes were healing and the uveitis was inactive. The iris of each eye was bound down by many posterior synechiae. The scleral ulcer of the left eye which had not been covered by a flap was present but smaller. The scleral ulcer in the right eye had healed. Nodules were present in both eyes about 10 mm. off the limbus. In the right eye one nodule had healed to some extent, leaving the sclera thinned. The dark uvea could be seen through the yellow, semi-fluid center of the nodules. The patient died May 20, 1950, of pulmonary tuberculosis.

PATHOLOGY

In examination of specimens of tissue taken from the margin of an ulcer in this case of scleromalacia perforans it was noted that the conjunctival and episcleral tissue at the ulcer margin was in reality the edge of a nodule, the top of which had sloughed away.

The cellular debris in the ulcer margin consisted mainly of lymphocytes, polymorphonuclear leukocytes and plasma cells with nuclei in various stages of degeneration. The wall of the ulcer was composed of epithelioid cells infiltrated by many lymphocytes and plasma cells. Occasionally a plasma cell was seen to have undergone some colloid degeneration. In the wall of the ulcer were several giant cells having nuclear arrangement of Langerhans type. No histiocytes were observed in this section. There were fibroblasts surrounding and among the epithelioid cells but a notable lack of new vessels. The vessels near the margin of the ulcer were surrounded by small collections of lymphocytes and plasma cells. No actual thrombosis was noted in the section.

The features usually observed in examination of tissue in cases of scleromalacia perforans are (1) necrotic scleral nodules containing lymphocytes and degenerated collagen located in the anterior sclera; (2) epithelioid cells surrounding the necrotic center, often in radial arrangement; (3) giant cells of Langerhans type, but no macrophages.

DISCUSSION

Verhoeff made extensive histologic study of the lesion in the case reported by him. He described the lesion as a central mass of necrotic lymphocytes surrounded by five or six layers of radially arranged epithelioid cells. An occasional giant cell of Langerhans type was present, but there were no macrophages. Some eosinophils were present.

Prior to Verhoeff's exhaustive study, the only description of pathologic material was that it was either chronic inflammatory tissue or non-specific granulomatous tissue.

A case first reported by Kiehle in 1937⁵ was described histologically in 1946.⁶ The description closely paralleled that of Verhoeff, as did a case studied by Harbater in 1949.⁴

Eggers³ reported similar microscopic observations in a case of what was termed *necroscleritis nodosa*, a name first advocated by Verhoeff¹¹ in 1938.

The case presented herein differed from the one first described by Van der Hoeve in that there was more diffuse episcleritis which spread downward to the sclera. In no previously reported case was there bilateral ulceration except where a nodule has been incised, and ulcers of that order usually remained indolent with little or no response to treatment. The sudden appearance of ulceration in the present case possibly represented obliterative periarteritis or endarteritis in the area involved, as that condition was frequently observed histopathologically, around the nodules.

The patient had hypertrophic arthritis but the absence of true rheumatoid arthritis in the case here reported is not distinctive. The occurrence of pulmonary tuberculosis, which was the ultimate cause of death, created a differential diagnostic problem. The eye could not be obtained for final complete pathological examination.

The similarity of the essential lesion of this disease to that of subcutaneous rheumatic nodule and to a tubercle must not be overlooked. The necrotic connective tissue and the cellular debris in the center surrounded by epithelioid cells is common to these three lesions.

The occurrence of ulcerative tuberculous scleritis or even a tuberculous process in the eye at all in the presence of active pulmonary tuberculosis is extremely uncommon. The facts that there was no response to streptomycin and that cultures and guinea pig inoculation were negative for tuberculosis were taken as presumptive evidence that these nodules and ulcerations were not primarily tuberculous. This was substantiated further by the biopsy of the ulcer margin, in which the conditions observed were not the pathologic changes associated with tuberculosis.

It is possible that the repeated use of fever therapy for the uveitis reactivated old quiescent pulmonary tuberculosis, but repeated tests and x-ray films gave no indication of pulmonary disease until the patient had been under treatment for eight months.

In several of the cases reported by other investigators cultures and animal inoculations were carried out, but in none was a tuberculous process demonstrated. Verhoeff stated that if the disease were of tuberculous origin, material from the lesion would be extremely likely to infect a guinea pig. He called attention to the fact that, although all the elements of a tubercle are present in many kinds of lesions, it is generally accepted that the cellular arrangement is the diagnostic feature. In none of the histologic material in any case was the typical eosinophilic center of epithelioid cells surrounded by lymphocytes of a typical tubercle observed.

There are more giant cells in scleromalacia perforans and not the characteristic palisading usually seen in a subcutaneous rheumatoid nodule. Possibly there is a slight alteration in the lesion because of some special reactivity of the scleral collagen. The proximity to the surface and consequent lower temperature may be of consequence. However, it is felt that the lesion is most probably a rheumatoid subcutaneous nodule in the eye.

In the tubercle, giant cells are produced in response to the presence of a fatty acid which is present in the organism. No source of this or any fatty acid is known in scleromalacia perforans at this time. Other chemical stimuli to

giant cell formation remain to be described. There may never be enough cases of scleromalacia perforans to permit as complete a study of the chemical factors as there has been in tuberculosis. Great strides have been taken in the past years in this field in other collagen disease, and inference from these studies may help answer questions about scleromalacia perforans. The response or lack of response to cortisone will certainly add to understanding of basic pathological chemical factors of the lesions. Cortisone was not available for the patient in the present case.

SUMMARY

A case is presented of scleral disease which clinically and pathologically resembled scleromalacia perforans, having scleral nodules progressing to indolent ulcers. The diagnosis was complicated by pulmonary tuberculosis. Local therapy appeared to be of value only in controlling secondary infection. Healing at the sites at which specimens for biopsy were excised from nodules was unsatisfactory; ulceration occurred and not until a conjunctival flap was placed over the wound did healing take place.

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Discussion by A. R. IRVINE, JR., M.D., Los Angeles

In recent years there has been considerable evidence that collagenous tissues often react violently to various antigens. This so-called hypersensitive state is particularly apparent in the scleral diseases described in the foregoing presentation. In addition to its high collagen content, the sclera is comparatively avascular. These two factors are primarily responsible for the clinical and pathological characteristics of scleral granulomatous disease. In this regard I have never been impressed with the distinguishing characteristics of the various types of clinical scleritis described by the author. It appears that the classification of keratitis as brawny, sclerosing, or as scleral malacia, is dependent upon a difference in degree and location rather than a difference in type of inflammation. Chronic granulomatous disease within the sclera produces multiple small foci of necrosis because of the avascular nature of the sclera, whereas a similar process in a tissue with a good blood supply might well develop to considerable size before necrosis occurs. The scleral pathologic changes encountered in the conditions discussed by the author depend upon the peculiar hyperreactive state

and the histologic nature of the sclera, and have a wide variety of etiological agents.

Since the advent of cortisone, it has become extremely important to determine the specific cause in any given instance. Whereas many cases of so-called non-specific scleritis respond well to the use of cortisone, it is becoming evident that where bacteria are present the use of that drug is contraindicated. It appears clinically and experimentally that although cortisone suppresses the inflammatory response, it does not repress the growth of bacteria. Rabbits infected with tubercle bacilli will show apparent improvement and rapid regression of inflammation when treated with cortisone only to have massive necrotic lesions develop in which large numbers of tubercle bacilli are seen after a period of time in spite of continued cortisone therapy. The same is true of experimental syphilis. I have seen two instances of spontaneous perforation of disciform keratitis after prolonged treatment with cortisone drops. In another case a patient with chronic granulomatous scleritis and uveitis became much worse and had perforation and atrophy of the involved eye after the use of cortisone topically and systemically. It becomes apparent, therefore, that it is not sufficient to classify scleral disease on the basis of its location and pathological anatomy, but that it is necessary to continue to search for the specific etiological agents.

Perineal Myoma

MILTON Z. LONDON, M.D., Los Angeles

TUMORS IN OR NEAR the prostate usually present no great diagnostic problem. Occasionally there may be clinical uncertainty as to whether a mass is primarily rectal or primarily prostatic. Most enlargements or masses in this area are owing to changes within the prostate—most frequently benign hyperplasia, malignant neoplasm, prostatic cyst, or prostatic abscess. Some masses deep in the perineum may arise as periurethral abscesses, others as perianal abscesses. Other lesions which may be felt by the examining finger as a mass in the region of the prostate are cysts of the seminal vesicle or of Cowper glands. Sarcoma may originate in or adjacent to the prostate and cause unusual rectal findings.

In the case here reported an unusual lesion raised a problem in the differential diagnosis of what might be called periprostatic tumors. In a careful survey of indexes of medical literature and various textbooks of urology and pathology no mention of a similar instance of perineal myoma was found.

CASE REPORT

A 41-year-old man was first observed May 20, 1949, because of complaints of urinary frequency, urethral irritation, feeling of resistance to emptying of the bowel or bladder and feeling of fullness in the perineum for the preceding month. These symptoms were first noted in association with non-specific urethritis.

Temperature was 99.2° F. Blood pressure was 230 mm. of mercury systolic and 140 mm. diastolic. The urethral meatus was hyperemic and contained a small drop of clear mucoid material. On rectal examination the prostate felt small and of normal consistency. Immediately above the prostate on the left side was a spheroid mass about an inch in diameter. It felt cystic.

Urine in both glasses of a two-glass test was cloudy and contained shreds of blood and mucus. The pH of the urine was 5.5, the specific gravity 1.018, and albumin content 3 plus. It contained no sugar. Upon microscopic examination



Figure 1.—Largest lobule of the mass in process of being dissected out of the perineum.

of the sediment many erythrocytes and leukocytes were noted. No bacteria were observed in Gram stained or in Ziehl-Nielsen stained smears. Pus cells were noted in a smear of material from the urethra, but no bacteria were seen in a Gram stained specimen.

The patient was treated with sulfadiazine for one week and the urethral discharge, pyuria and hematuria promptly cleared. The mass and the obstructive symptoms persisted. An intravenous urogram was made on May 28, 1949, and both kidneys were roentgenographically normal. Upon the floor of the bladder was the imprint of a large mass in the region of the prostate. A post-voiding film showed moderate retention of dye in the bladder.

Several attempts were made to aspirate material from the mass through a needle in the perineum, but no fluid was obtained. As hypertension and albuminuria persisted, consultation was advised and the consultant diagnosed "essential hypertension" of fairly advanced degree. The endogenous creatinine clearance was reduced to about two-thirds of normal, indicating definite impairment of renal function.

On September 8, 1949, the perineum was explored surgically. With the patient in the perineal lithotomy position the mass could be seen and felt bulging in the left ischio-rectal fossa. The left two-thirds of a perineal prostatectomy incision was made. The most superficial lobule of the tumor was promptly exposed in the superficial fatty tissue. By careful dissection a multilobular encapsulated tumor was removed from the perineum. One lobule (Figure 1) was the mass adjacent to the prostate that had been felt previously. There was no attachment to prostatic capsule or bulbous urethra.

Pathologist's report: The specimen was an 8x7x2 cm. flabby lobulated mass of tissue, composed of confluent irregular, poorly defined lobules. Sectioned, the substance was

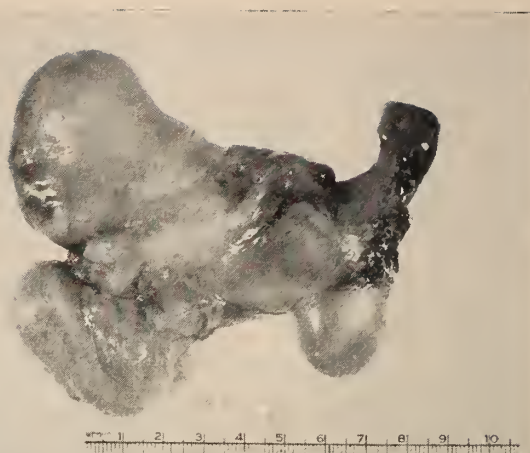


Figure 2.—Gross appearance of lobulated myoma.

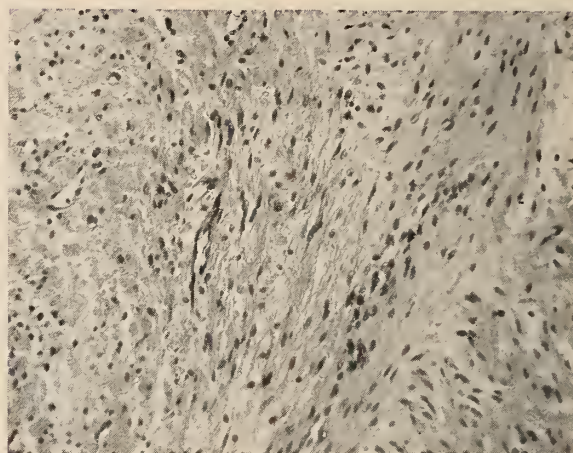


Figure 3.—Microphotograph showing uniform fibromuscular structure of the tumor.

observed to be fairly uniform, translucent, pink-gray and semi-gelatinous (Figure 2). Microscopically the specimen was observed to be a circumscribed nodule composed of fibromuscular tissue. Some of the intervening stroma was loose and fibrillary and edematous. The lesion was quite vascular (see Figure 3).

The diagnosis was: Myoma, perineum. The pathologist commented that the lesion could have originated from pre-formed vessels, from the prostate, or possibly from muscle near the base of the penis.

The wound healed promptly and the patient left the hospital on the fifth postoperative day. Subsequently he reported greater ease of urination and of defecation. The blood pressure was the same after the procedure as before.

SUMMARY

A case of perineal myoma is presented. Differential diagnosis and possible origin of the tumor are considered. This is believed to be the first report of an encapsulated myoma occurring in the perineum of a male.

6515 Wilshire Boulevard.

California MEDICINE

EDITORIAL

California Medicine Takes A New Look

IN THE PAST six and a half years an attempt has been made to develop the scientific side of CALIFORNIA MEDICINE so that it would be truly representative of the best of medicine in California. With the interest and cooperation of the Editorial Board and Editorial Office this has been accomplished to some extent. At the direction of the Council of the C.M.A. and beginning with this issue of January 1953, the organizational side of CALIFORNIA MEDICINE will be further developed to reflect as accurately as possible the official position and views of the California Medical Association on problems which vitally affect all aspects of medicine, and to report events and developments throughout the state and the country which bear significantly on the practice of medicine, on medical education, on medicine in government and government in medicine.

In the further development of the organizational side of this Journal, the Editor and the Editorial Board will welcome criticisms and helpful suggestions.

With this issue, consideration is given to two highly important problems facing the physicians of California. One of the most important issues of the day in the practice of medicine relates to the free choice of physicians by patients. We hold that the free choice of a physician by a patient is essential for the best medical care and for an adequate physician-patient relationship. To whatever extent this principle is compromised, there is likely to be proportional deterioration in medical care and, all too often, an increase in the cost of that care. Closed panel forms of practice do not permit free choice of physician and in other ways tend to cause deterioration of the best in medical care. A more complete consideration of this most important problem is

noted in the editorial entitled "A Defense Against Socialized Medicine"?

So that many physicians in California may become acquainted at first hand with the very significant report of an eighteen months' study by a special committee to consider the desires of the California Medical Association in relation to C.P.S. and voluntary health insurance, there is published in this issue the full report of the Bailey Committee, given to the House of Delegates at its Interim Session in December 1952. This thought-provoking report should be discussed fully in every county medical society throughout the state, so that in May 1953, when the House of Delegates reconvenes in Los Angeles, the members of the House will be well informed of the views of their constituents and prepared to take appropriate action.

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"A Defense Against Socialized Medicine"?

A RECENT EDITORIAL in the *New England Journal of Medicine* cites closed panel medical plans in general, and the "Permanente idea" in particular, as "worthy of careful study by physicians throughout the country as one type of program that may not only erect further defenses against the encroachment of socialized medicine, but actually provide more and better medical service, at lower cost, and at the same time maintain the dignity of both doctor and patient."

In California, we have long carried out the "careful study" of closed panel plans which the editorialist recommends. We have had the advantage of direct observation, so that our conclusions need not be based wholly upon a report of the medical director of such a plan, which the *New England Journal* admits "might be interpreted as being tinged with enthusiasm and self-interest . . ."

Our study shows closed-panel plans destroy the doctor-patient relationship. This destruction begins with the plan salesman, who must convince the prospective buyer it is to his advantage to break his relations with his personal physician. This is necessary because these plans offer no provision for indemnification of the patient who prefers his own doctor to the plan doctors. Then, having become a member of the plan, the patient finds many barriers to the establishment of the desired personal physician-patient relationship. We have just received a letter from a patient which is only a variation on the familiar theme. She went to the plan doctor in her area, who sent her to the nearest Permanente plant (Oakland) to complete spontaneous abortion. There her treatment was handled by three successive doctors, none of whom she saw more than once. So, she will drop the plan, she says, and return to her personal physician, who will see her through any illness.

Another destroyer of the doctor-patient relationship is the turn-over of Permanente doctors. There are at least 35 former Permanente doctors now in private practice in the East Bay area alone. What percentage went elsewhere, we do not know. This parade of doctors into and out of a closed-panel plan in itself precludes sufficient continuity to establish and maintain the kind of relationship between doctor and patient necessary to the total medical care needs of the whole patient.

We find also that closed panel plans rob the patient of his freedom. He may not dismiss his plan physician and select another of his choice outside the plan without loss of protection for which he has paid. Under the Permanente plan, for the same rea-

son, he cannot change hospitals. The subscriber contracts today for whatever quality of service may be available from the plan at an indeterminate future date—the date of his future illness. And he is "stuck" with whatever quality of service is then given to him. The patient thus becomes the captive of the plan. One California closed-panel plan recently changed ownership; its patients were "bought and sold." The subscriber who is dissatisfied with the service, or who at the time he is ill would feel confidence only in a physician who is not a captive of the plan, does have a choice. He may take the unsatisfactory service, or he may write off his health plan dues as an ill-advised investment and pay the total cost of his care to the doctor of his choice. Many choose the latter.

A dangerous element in closed panel plans will be immediately obvious to every student of the force of incentive in human relations. This is a particularly important factor when incentive concerns a contract for a service that is so difficult of evaluation and measurement as medical care.

The *Permanente Foundation Medical Bulletin*, cited by the New England editorialist, talks about incentive thus: ". . . This results in a reversal of the usual economics of medicine. The well person becomes an asset to the hospital and doctor—the sick person a liability, thus heralding the preventive medicine of the future." The preventive medicine of Permanente so far is truly for the future; we have found no evidence of present achievement. But we agree that the closed-panel plan makes the sick person a liability to both hospital and doctor. The incentive, then, is to withhold treatment, to use short cuts, or to cheapen it, which is the reverse of the incentive of the doctor in private practice.

The only kind of medical economics that guarantees protection of the patient's interests is that which gives incentive to the doctor to prescribe and treat as much as the patient needs. Few people—even doctors—forever violate their own interests.

And now, specifically as to Permanente. Who and what is Permanente? In California, when we have difficulty with Permanente, we start with the doctor or doctors then acting as medical directors and end up talking to Mr. Henry Kaiser. We have no technical proof that Permanente is the practice of medicine by a layman. But we inevitably end up talking to—or, more accurately, being talked to and often threatened by—Mr. Kaiser. Our medically trained minds cannot follow Permanente's intricate intercorporate entanglements, rental arrangements, partnerships, interorganizational contracts and pooled personnel and purchasing arrangements. But we

know that what Mr. Kaiser says will happen in Permanente usually happens.

Here, then, in our opinion, is the pattern for lay practice, control and direction of a profession. We need not argue the public interest factors in this condition. They have long since been decided and repeatedly reaffirmed by the courts. How many profit-minded laymen will see in the "Permanente idea" the opportunity to "reverse the usual economics of medicine" for themselves? And what will they do with it? Whom will they exploit? And to whom will they be answerable?

Typical of the mechanistic "efficiency," of the unprofessional approach of Permanente to medicine, is its solicitation of patients. We assume it is unnecessary to quote or interpret the Principles of Medical Ethics of the American Medical Association to our readers. Patients in every group sold by Permanente are solicited, with the full knowledge of "Permanente" but not with the full knowledge of all of the *doctors* of Permanente. Many members of these employed groups are currently under the treatment of other doctors. Our studies of Permanente reveal that either the ethical prohibition of solicitation of patients by any doctor is wrong, or all Permanente doctors are unprofessional and unethical. Doctors outside Permanente may not solicit patients; Permanente doctors solicit their patients.

Much is made of the financial success of Permanente. Captive doctors, seeing and treating many patients, is one reason. Interns and residents treat some—how many we do not know. Another reason for financial success is that many subscribers who enroll do so reluctantly, as minority members of employed groups. These persons continue to go to their private physicians, keeping Permanente insurance in the background for catastrophes. It is difficult to find a private physician in the East Bay "stronghold" of Permanente who does not have Permanente plan members who continue—even for major operations—with their personal physicians. Each such visit, each such treatment paid for by the patient, is a contribution to Permanente's spectacular financial success.

If the values of the art and science of medicine can be measured by an industrialist's standards of production and efficiency and profit, Permanente is an unqualified success. But medicine has other standards.

The Boston editorialist believes that closed panel plans may provide "more and better medical care." It has not yet been produced by these plans. "Lower cost"? Yes, in premium. "Maintain the dignity of doctor and patient"? Former Permanente doctors

have regained their dignity in private practice and lose no opportunity to dispute that claim.

As to the patient's dignity: the closed-panel plan tells him he can't select his own doctor. Permanente can do it better, despite its doctor turn-over record. The patient is assigned to a doctor, is told by the plan what treatment he gets, by whom and where. He is *not* free to exercise his own judgment and choice. Can this maintain his dignity?

Our confidence in the good judgment of the American people is such that we are not deeply concerned about the future of closed-panel plans. The "Permanente idea" is *not* new. The history of nearly every medical society will reveal the same problem under the name of "Lodge practice," with inevitably the same result as we predict for the closed-panel plan. The people will make the final determination. Our studies show they want their personal physicians, whose incentive is to serve them and not some third party—union leader, government agency, lodge master or industrialist.

So, we too would join the *New England Journal of Medicine* in counseling study of closed-panel plans. The more thinking and study, the more experience doctors and patients have with closed-panel plans, the more each will realize that it is pointless to "erect further defenses against the encroachment of socialized medicine" if those defenses consist mainly of instituting the worst dangers of socialized medicine.

New Approach

MOST SIGNIFICANT development emerging from the 1952 Interim Session of the C.M.A. House of Delegates was the proposed new approach to the problem of providing insurance against the costs of medical and hospital care. The C.P.S. Study Committee, crystallizing its intense research of the past eighteen months, offered a plan which is startling in some aspects but which basically appears as a new and sound appraisal in this still experimental field.

The committee report proposes (a) that indemnity insurance be utilized as the carrying agent, (b) that co-insurance govern the underwriting procedure, with the policyholder accepting his legitimate share of the risk, (c) that "average fees" be worked out, successively, by individual physicians, by county or regional areas, and by the state as a whole, and (d) that deviations upward from accepted "average fees" be undertaken only with the knowledge and consent of the patient. Failure to accomplish the last of these proposals would be *prima facie* cause for the patient to seek the counsel and aid of the

professional conduct committee of the county medical society.

While none of the above proposals is new in itself, the combination under this suggested program represents a new concept in the search to provide top-flight medical and hospital care under conditions and at fees which are acceptable to, and may be afforded by, the general public.

In the next few months the county medical societies will ask themselves and their members whether or not they wish to accept this far-reaching proposal. Most knotty problem apparent in the coming deliberations will be the establishment of "average fees" by individual physicians and by their county societies. Upon this branch of the proposal hangs a large

measure of the potential success of the entire program.

The entire text of the study committee's report appears elsewhere in this issue of CALIFORNIA MEDICINE. Every member should read this document carefully, repeating the process as needed to assure a complete understanding of the philosophy developed after months of study, testimony, discussion and deliberation. Here is proposed a new approach to the ever-growing problem of health insurance. The considered opinions of all county medical societies will be vital in determining whether or not this plan offers the ideal path for medicine to take in leading the way to a great public service.

Increase in Cancer Incidence

FOLLOWING COMPLETION of a cancer survey in the Birmingham, Alabama, area in 1948, National Cancer Institute reports a 71 per cent increase in incidence and a 50 per cent increase in total cases treated since the last survey there in 1938.

Dr. John R. Heller, institute director, attributes the increases partly to better reporting by physicians, improved diagnostic and case-finding methods, and aging of the population. "... The survey shows that more cancer patients received hospital care in 1948 than in 1938, due in part to the increase in hospital facilities in Birmingham," he said.

The survey, eighth in a series by the Institute, was carried out with help from the Jefferson County Medical Society, the Jefferson County Hospital and Birmingham, Jefferson County and State Health Departments. — *From the A.M.A. Capitol Clinic.*

California MEDICAL ASSOCIATION

NOTICES & REPORTS

C.M.A.-C.P.S. Study Committee Report

The following report was made December 6, 1952, by a committee appointed by the Council of the California Medical Association in accordance with a resolution passed by the House of Delegates of California Physicians' Service at its 1951 annual meeting. The purpose of the committee, as stated in the resolution, was "to ascertain the expectations of the medical profession of California in regard to C.P.S."; and the function of the committee, as set forth in the resolution, was "to make a careful study of C.P.S. as related to the operations of private insurance companies and other prepaid medical care groups, and to determine the future role and purpose of California Physicians' Service in the whole field of voluntary prepaid medicine."

The membership of the committee appointed by the Council is as follows: Wilbur Bailey, chairman, Los Angeles; James B. Graeser, vice-chairman, Oakland; Paul D. Foster, vice-chairman, Los Angeles; Alson R. Kilgore, San Francisco; Dave F. Dozier, Sacramento; Francis E. West, San Diego; J. M. de los Reyes, Los Angeles; Harold P. Tompkins, Los Angeles; Donald A. Carson, San Francisco; Gary Campbell, Santa Barbara; Henry Randel, Fresno; F. E. Clough, San Bernardino; Thomas Farthing, San Mateo; Leslie B. Magoon, San Jose; Edward C. Rosenow, Jr., Pasadena.

Mr. Rollen Waterson, executive secretary of the Alameda-Contra Costa Medical Association, served as executive secretary of the committee.

THE FIRST PORTION of our report constitutes a follow-up on the progress which has been made on the five specific recommendations in our interim report submitted to this House at the meeting held April 27-30, 1952. We shall then present further recommendations as determined during the last 18 months in some 50,000 doctor-hours of work by the 15-man committee appointed by the California Medical Association to study California Physicians' Service. Lastly, we shall present a summary.

1. *Multiplicity of Contracts.* C.P.S. now has ten basic contracts which constitute 96 per cent of those which are written. The other 32 types of contract constitute only 4 per cent. Progress is being made toward further simplification, for at the present time a collection of the various contracts is almost as thick as a telephone book. Contracts tailor-made to fit the wishes of small groups are not only con-

fusing but are actuarially dangerous. It is hoped they will be avoided in the future.

2. *Method of Payment.* It was recommended by this committee that the previous policy be reversed, and that the patient should in the future be told how much was being paid the doctor by C.P.S., either by the method of a double-signature check such as is used by Blue Cross in its more than 500,000 accounts in Southern California, or by some other means. C.P.S. has started such a system on a very small scale in a few small communities. To date the experiment is successful.

3. *Defective Liaison Between C.P.S. and C.M.A.* The Council has up to this time appointed three of its members to the Board of Trustees of C.P.S. by way of improving the liaison between the two groups.

4. *Imperfect Communication.* More personalized methods of communicating with the doctor have been established.

5. *Blue Cross-Blue Shield Relations.* A recommendation was made most emphatically that the Council of the C.M.A. undertake to negotiate with the Boards

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of Trustees of Blue Cross plans and the California Hospital Association to achieve cooperation between these plans. Obviously, the catalyst in such a situation should be the C.M.A. Such recommendations were made by your committee to the House of Delegates and later to the Council. However, no such meetings have as yet been arranged by the C.M.A.

It has been further called to the attention of our committee that it is very necessary for outstanding public-spirited medical citizens to become future officers of C.P.S. The best cannot be expected from this \$20,000,000 corporation if its trustees are selected in a hurried conference just before the delegates convene. Nor should newly-elected trustees be expected immediately after their election to select a president.

As a final phase of this review on progress made to date on our recommendations, the committee believes that much has been accomplished but there is still much to do to eliminate that great bugaboo of all Blue Shield plans—*overuse*. Disciplinary action has been taken by various county medical societies.

FINAL REPORT

This is the final report of your C.M.A.-C.P.S. Study Committee, appointed eighteen months ago to "ascertain the expectations of the medical profession of California in regard to California Physicians' Service in the whole field of voluntary prepaid medicine," to quote the resolution by which your committee was created.

California Physicians' Service was incorporated in 1939 by a group of physicians—members of the California Medical Association—for the purpose of creating a voluntary, prepaid medical care plan to be sponsored by the medical profession of California.

The men who organized C.P.S. wrote into its Articles of Incorporation this statement: "We . . . do hereby declare that the duties and obligations of the [medical] profession are not only leadership in the maintenance of high standards of medical service, but also in the means of distribution of that service so that all who need it may receive it."

That statement was true then; it is doubly true today. As the years have passed and the rapid alterations of the national economic climate created by the war and its sequel of confusion have been reflected in the economics of medicine, new problems have been piled upon the old. Both the rich and the poor have become fewer. Today, a person nominally in a low income group may, from the point of view of protection against expenses of illness, actually be in a higher income category because of fringe benefits included in his union contract. Many people and groups, besides doctors and patients, have developed a burning interest in health insurance.

Caught in this confusing cross current of vigorous, undirected forces is the physician. But he cannot give up, he cannot withdraw, because he still knows deep down that it is he, the physician, who must face up to the responsibility of diverting these cross currents into one powerful stream whose single direction will be toward the greatest good of the people of America.

Your committee has examined criticisms of California Physicians' Service by both physicians and laymen in its effort to discover the reasons for failure of physician acceptance and the causes of lay dissatisfaction. We have consulted representatives of every interested group, and we have employed experts in the fields of insurance and of consumer research. We confess that we have many times made up our collective mind, only to have new evidence or deeper study change it for us. We have allowed ourselves, too, the luxury of inconsistency, as comparison of our interim report with this final report will demonstrate.

Our experience thus emphasizes that no final answer to the many problems of health insurance can be written today. We have learned above all else that no committee such as ours, no national or even international expert, no group of insurance underwriters and, least of all, no covey of government bureaucrats, can do more than chart a tentative course of action, leaving always ample room for shifts of policy as experience proves a given course to be in error.

Nevertheless, and at this present moment, we believe that any of the ten thousand members of the California Medical Association who had been subjected to the same long, laborious education as have we, would have come to share the convictions we present in this report.

We submit this report with profound humility, and with a deep realization of its limitations.

The first step in a rational attack upon the problem of health insurance must be the reduction of its complexities as near as possible to their fundamentals. Of these, the most basic seems to us to be a definition of exactly what we mean by the term "health insurance."

Your committee defines health insurance as the application of the insurance method of group assumption of an individual financial risk to the costs of private medical care. It is important to realize that it is *not* the purpose of health insurance *as such* to reduce the costs of illness, to change the distribution nor to improve the quality of medical care, to alter the pattern of private medical practice, nor to be an instrument for social change (with all the connotations that term implies).

There stems from our definition the obvious fact that health insurance concerns two separate and very

different fields of human endeavor: The business of insurance and the profession of medicine. This division leads us to a restatement of our problem, thus: What are the basic principles of insurance as a business, and what are the basic elements of medicine as a profession, both of whose tenets must be considered if the techniques of one are to be applied to the other?

Principles of Insurance

The first is that group assumption of an individual financial risk is economic only if the possible size of individual loss be large, and the individual expectancy of loss occurrence be small. To quote Linder, our actuarial consultant: "*Insurance is at its best when it protects against the large loss which is unlikely to happen, and at its worst when it protects against the small loss which is likely to happen.*" It is obvious that group payment of small losses which are almost certain to occur to most of the members simply increases the cost of medical care by the amount of administrative expense and thus *rather than protecting against loss, increases it.*

The second principle, that insurance must act only to *mitigate the loss* and not to reward the loser, is one whose obvious basis is the human element.

The third principle is that the primary value for which the insurance premium dollar is paid is protection. Failure to sustain a loss against which insurance protects should be a matter for self-congratulation and not grounds for the policyholder to feel that he has not received something for which he has paid.

Our fourth principle is that *insurance can be written only against a determinable risk.* Loss expectancy is a function of two factors: The frequency of occurrence of loss and the average amount of each loss. Without a statistically determinable figure for each, underwriting becomes guesswork and the accurate determination of premium rates is impossible.

So much for the principles of insurance.

Elements of Medical Practice

Our second question was: What are those elements of medical practice upon which will fall the impact of any changes in medical economics?

The first such element is the greatly increased costs of modern medical and hospital care. The financial burden of serious illness can be enormous even on those in comfortable circumstances, and can be catastrophic on those of modest means.

The second element of medicine which is germane to our problem is that the occurrence of *major illness is relatively infrequent* and wholly unpredictable to the individual, but the frequency of such illnesses in a group large enough to be statistically significant is relatively constant.

The third element of the economics of medicine

which bears on the application of insurance to health costs is the wide variation in costs of care for any given type of illness. Besides the variation resulting from the fact that medicine is a biologic and therefore an inexact science, there are those other variations due to great differences in patient demand for service and those which result from the varying opinion of physicians as to the necessary amount and the monetary value of their services.

The fourth professional element requiring consideration is a trend rather than a fully established and accepted practice, and represents a change in the traditional economics of medicine. That element is the trend toward uniform fees; a trend which consists of three components: First, the trend toward a fairly uniform scale of fees on a community basis; second, the trend toward fairly uniform fees within each specialty of medicine, irrespective of geographic considerations; and third, the trend toward a uniform, individual schedule of fees for each physician which, while based to some extent on the general level of fees in his community and the average schedule of his specialty, varies with his prestige, experience, skill and with patient-demand for his services.

It is important to note, however, that this trend toward uniform fees is only a modification and not a nullification of the traditional practice of determining fees on the basis of the patient's ability to pay, in that this uniform fee scale is used as a base from which deviation is frequent as the patient's economic status dictates. Further, this deviation more often is in the direction of reduction where need demands and less often is in the direction of increase for the well-off patient. We think that most of you, if you will examine your own practices, will confirm these observations.

The fifth element of medicine affecting our problem is at the same time the most difficult to describe and the one whose protection and preservation is to us most vitally important. That element is the personal relationship between patient and physician which follows from the fact that medicine is an art as well as a science, and a profession rather than a business. This relationship is the foundation for the practice of good medicine, and is the virtue of private medical practice to which both patient and physician cling.

To the patient, around this element revolves his right to free choice of his doctor, and his desire to retain full freedom of action in caring for his health as in caring for all his other material needs. The great majority of our citizens still believe in the benefits conferred by the free-enterprise system, and in the virtues of individual freedom and the right of self-determination. And they want no compromise with these principles in any field of endeavor, medicine included. Further, the patient knows that if a

third party intrude into the traditional two-party relationship between himself and his physician on an economic plane, there will inevitably result an equal intrusion on the professional plane.

To the physician, too, around this element of an exclusive bipartite relationship between himself and his patient revolves the doctor's desire to remain an independent individual whose economic as well as professional decisions are his alone to make. But, more than that, it concerns his certain knowledge that his effectiveness as a physician depends on maintaining inviolate an intimate two-party relationship of doctor to patient.

For purposes of convenience in the following discussion, this element will be identified as patient-physician freedom but, when that term is hereafter used, its full connotations must be remembered.

These, then, are the basic principles of insurance as a business and the important elements of medicine as a profession. Our next step is to examine the application of one to the other.

Insurance Principles Applied to Medical Economics

Our first insurance principle was that group assumption of an individual financial risk is economic only if the possible size of individual loss be large, but the individual expectancy of loss occurrence be small. Our applicable elements of medicine were first, that the financial impact of serious illness can be enormous, and second, that serious illness is infrequent and unpredictable to the individual but is a relative constant in the group. One inescapable fact seems to us to derive from these premises—that only the costs of serious illness constitute an insurable risk.

While accurate definition is difficult and many variables intrude, to the physician the basic differences are those of comparative frequency and relative expense. To any given individual, major illness is infrequent and expensive; minor illness is frequent, and its legitimate expense per disability is low. But the most important difference between major and minor illness is the element of patient control of costs. A person seldom debates the need for medical care for a fracture, for perforation of a peptic ulcer or for coronary occlusion. But whether or not he seeks a penicillin shot for his coryza will depend on his own estimate of probable benefit measured against cost and inconvenience. We are not belittling the need for medical care of many minor ailments; we are simply urging that the reasonable person uses some degree of discrimination in deciding when he needs a physician's services, and the volume of medical care rendered for minor illness will depend to a great degree on this element of patient decision. Since that decision involves the

measuring of cost against benefit, any lessening of costs will increase the demand for benefit.

Our first conclusion, then, must be that the COSTS OF SERIOUS ILLNESS are susceptible to the valid application of the insurance method, but the COSTS OF MINOR ILLNESS do not so qualify.

Our second principle, that insurance must act only to mitigate the loss, *not to reward the loser*, we already have said should be self-evident. But our third medical element was that medical costs varied widely because of differences in patient demand for service and variations in the opinions of physicians as to the necessary amount of care and its monetary value. Partly because of this element, and partly because human nature is what it is, two kinds of abuses of existing health insurance which contravene this principle of not rewarding the loser are of more than occasional occurrence. The first is typified by that patient whose insurance policy pays him more as an indemnity for a medical service than his physician charges, and by that other patient, who, by a combination of insurance policies and state disability benefits, is able to earn as much by occupying a hospital bed as by working at his job. The second is typified by the patient the generous provisions of whose policy invite unnecessary service.

The only effective brake against these inflationary charges and the only way to avoid "rewarding the loser" is the practical application of the principle of patient participation in his costs. This sharing of costs by insured and insurer has a name—co-insurance.

Our second conclusion, then, is that the diversion of the premium dollar to pay claims for unnecessary service can best be prevented by applying the principle of co-insurance to health insurance coverage.

Our third principle was that the primary value for which the insurance premium dollar is paid is protection. A frequent violation of this principle which is too often unchallenged is the concept of insurance as a budgeting device. To budget an expense means to pay a fixed sum in small installments, for which exact monetary value is received in return. The lucky insurance policyholder will, however, have no monetary return for his premium, and insurance cannot therefore correctly be considered a budgetary mechanism.

A similar and even more serious misconception of the primary value of insurance as protection is the increasing trend toward the granting of health insurance coverage as a fringe benefit in lieu of a wage raise, resulting in the almost unanimous reaction of the worker that to receive this sort of pay raise, *he must somehow collect on his health insurance*. The current demand of labor for full-coverage health

insurance is to a great degree based on this feeling that *health insurance has no value unless services be received thereunder.*

Our third conclusion, therefore, is that the HEALTH INSURANCE POLICYHOLDER must somehow be convinced that he WINS RATHER THAN LOSES WHEN HE FAILS TO SUSTAIN A LOSS against which his health insurance protects him.

Our fourth principle was that insurance can be written only against a determinable risk. We have already pointed out that the advance determination of probable losses requires two figures: The expected frequency of loss occurrence and the average size of each expected loss. The limits of actuarial accuracy will be set by the predictability of these two values.

We have already agreed that the factor of incidence is sufficiently constant to be possible of accurate, advance determination. At first glance, it would seem that experience also should furnish a reliable average unit cost which would be sufficiently accurate for the actuary. For many forms of casualty coverage that may be true, but observe conditions as they exist in health insurance, necessarily modified as they are by the elements of medicine we have described. We have pointed out the effects on medical costs of the variables of patient demand and of physician opinion, and we have emphasized the virtues of physician-patient freedom. These elements, reflecting not only the tangibles of time, effort and skill, but the intangibles of personal opinion and emotion, can act only to set the extremes of unit costs literally from zero to infinity. Further, even though it be his habit in private practice to accept different fees from different patients, the physician will not accept less from an insurance company for his services than is paid his colleague across the hall. Nor will the banker pay ten times the premium for his health insurance that the janitor pays on the grounds that the banker's physician will charge him ten times as much. Thus, in practice, the use of the average size of each loss as the theoretical unit cost of any given type of illness becomes impossible, and the fixing of an actual unit cost becomes necessary. In medicine, this means just one unpleasant thing—a fee schedule.

Our fourth conclusion, then, must be that for the costs of health care to be a determinable risk and thus susceptible to the application of the insurance method, the unit costs of medical care must be set by a fee schedule.

We have now come to the point where we can see very clearly the basic dilemma of health insurance—the incompatibility of the insurance requirement for fixed unit costs with preservation of the vital medical element of patient-physician freedom. Certain and adequate protection against the costs of a major illness can be given only if the costs of that

illness are set by a fee schedule, but the application of any fee schedule to the private practice of medicine is accomplished only by the intrusion into the physician-patient relationship of a third party, the insurer. Neither condition, therefore, can be met except at the sacrifice of the other.

Let us examine the conditions of our dilemma in terms of existing health insurance plans. There are two basic types of health insurance; service plans and indemnity plans. For you, these terms need no definition. There are many differences between them both in principle and in practice, but the really basic difference between them is the comparative weight each gives to the two conditions of our dilemma. Service plans, obviously, provide certainty of patient protection at a total sacrifice of patient-physician freedom. Indemnity plans, on the other hand, sacrifice certainty of protection in an effort to maintain patient-physician freedom. Thus, on the scale measuring these conditions, each plan is at the opposite pole to the other.

But, your committee asked, must we choose between black and white? Or may there be, instead, a gray zone somewhere in between these opposite poles within which a compromise might be obtained. That such a compromise might not be a vain hope seemed possible to us, if only on the grounds of an axiom that cannot be too often stated: That the best interest of both physician and patient will be fully served only if each gives full weight to the best interest of the other. That axiom, applied to the problem of health insurance, can only mean that it is to the interest of the physician that health insurance provide adequate, dependable coverage for his patient; and it is to the interest of the patient to maintain a free, unregimented medical profession with whose members his relationship remains on the same personal, two-party basis that it always has.

The defect of service-type health insurance was its sacrifice of patient-physician freedom; its virtue was certainty of beneficiary protection. Both the defect and the virtue result from the application of the principle of a fixed, compulsory fee schedule. It seemed to us that this element of compulsion is not capable of modification. There is no such thing as a degree of compulsion—it is all or none. As confirmation of this opinion, one may note that, whenever it has seemed wise or necessary to modify the service principle in a C.P.S. contract, the solution always has been to substitute for it the indemnity principle. We conclude, therefore, that no modification of service-type insurance to lessen compulsion is possible.

Now, let us approach the dilemma from the opposite pole and ask: Is there any possible modification of the indemnity-type plan which will gain certainty of patient protection without sacrificing patient-physician freedom? That there might be seemed to

us possible for several reasons, the most important of which, in our opinion, are:

First, many current indemnity plans carry a schedule whose level bears very little relationship to the usual fee for any given service.

Second, many current indemnity contracts have been slanted toward too much protection for minor illness and too little protection against costs of major illness; in other words, they ignore our criteria for insurability.

Third, and by far the most important, indemnity plans have so far been entirely a project of commercial insurance carriers without the advantages of cooperation, collaboration and assistance from the medical profession.

Our immediate problem then, is somehow to modify the indemnity principle to gain certainty of beneficiary protection without losing its virtue of patient-physician freedom—indemnity plan insurance by itself provides neither certainty nor adequacy of protection in that its indemnities may bear no relationship to the actual costs of an illness. To obtain certainty and adequacy of loss coverage, the total costs of an illness must be capable of advance determination, and that seems to bring us full circle again to the necessity for a compulsory fee schedule.

But, before we accept that as the apparent final conclusion and as defeat in our search for a compromise, let us go back to our discussion of the elements of medicine. We said there that there is a definite trend toward a uniform fee schedule, for each individual physician. At least theoretically it should follow that, if this physician adhered to his own schedule, it would be possible to write an indemnity policy against this schedule which would give real certainty and full adequacy of protection to the patients of that physician.

Now, extend this hypothetical situation to include those physicians in the same community whose standing is such that their individual fee schedules are very nearly alike. Given again that each of these physicians adhered to his own schedule, it would now be possible for the patient to choose freely between any of them and, with the same indemnity policy he again would have certainty and adequacy of health insurance protection.

If this group of physicians we describe above as having a fair uniformity of individual fee schedules constituted the majority of physicians in the community, we might fairly call them the "average" physicians, and their scale of fees would constitute the "average" fee schedule. And this "average" fee schedule would be a realistic base for the devising of an indemnity schedule which would give both certain and adequate protection against the costs of professional care rendered by these "average" physicians. If on the other hand, a patient sought care

from a physician whose individual fee schedule was above the average of the community, SO LONG AS THIS FACT OF THE HIGHER SCHEDULE WAS KNOWN TO THE PATIENT, the patient would still have certainty of protection in that he would know exactly how much his costs would be increased, and he would knowingly and willingly be accepting a lower degree of protection from his health insurance. THIS IS EXACTLY THE SITUATION WHICH HOLDS IN PRIVATE MEDICINE, when the patient who seeks the specialist or the physician of unusual attainments expects to pay accordingly and is, in fact, disappointed if he is not asked to do so. The only new factor we have added in order to attain certainty and adequacy of protection is the existence for each physician of an individual fee schedule whose general level, at least, is known to the patient BEFORE he seeks service.

By thus confirming and perhaps extending what already is a strongly set trend, we believe a reasonable compromise solution to the dilemma of health insurance is possible. To make it work, each physician will voluntarily have to limit his own freedom to the extent of accepting the principle of individual uniformity of fees. And the majority of physicians in a community must devise a community fee schedule whose level can fairly be described as the average fee charged the average patient by the average doctor in that area. If, to these devices of individual and community fee schedules be applied an indemnity-type plan of health insurance, your committee believes that adequacy and certainty of beneficiary protection can be attained with only minor limitations of patient-physician freedom. This, then, is the final conclusion of your study committee: That, if it be written against a realistic fee schedule, *if it provide coverage only for those costs of health care which are insurable, and IF IT BE GIVEN ACTIVE COOPERATION AND SUPPORT BY THE MEDICAL PROFESSION*, indemnity-type health insurance can be made a good answer to the problem of health insurance.

The first two of these conditions have already adequately been discussed, but the third "if" needs amplification. What exactly do we mean when we say "if it be given active cooperation and support by the medical profession"? We mean:

First, that having accepted health insurance as a social necessity, having agreed that good health insurance can be written only against determinable costs, and having decided that the only method of fixing determinable costs without drastic limitation of patient-physician freedom is to adopt the principle of uniformity of individual fees, each member of the medical profession must be persuaded that it is to his own best interest to adhere to that principle.

Second, that each individual physician must accept the corollary of that principle that departure

from his individual fee schedule is justified only on the basis of prior agreement with his patient.

Third, that the medical profession must agree that there can be such a thing as a realistic uniform community fee schedule whose basis is the fee charged the average patient by the average doctor, and must set up machinery to devise and periodically revise such a schedule.

Fourth, that physicians must agree that, for this uniformity of both individual and community fee schedules to accomplish its purpose, both the fact of their existence and their general level must be known to the patient, and doctors must take active steps to disseminate this information.

Fifth, that the medical profession must agree that the fee charged the patient will not be altered on the basis of the existence or degree of any insurance protection the patient may have.

Sixth, that the medical profession must extend to the field of medical economics what now is accepted in the field of medical ethics, that the profession has both the right and the duty to restrain the individual from committing acts injurious to the group as a whole.

Seventh, that the acceptance by the medical profession of the existence of this right and duty carries with it the responsibility of the exercise of the power necessary to protect this right and perform this duty, and the fulfillment of this responsibility will require that the profession create machinery for investigation, prosecution and discipline of those of its members who violate economic as well as professional ethics.

May we hope that this discussion of the principles on which our conclusions and conditions are based has convinced you, as it has us, that their application can result in a kind of health insurance plan which will retain the time-tested virtues of private medical practice and still fulfill the social need for certain and adequate protection against the heavy costs of serious illness.

To achieve clarity of understanding and to promote accuracy in debate we should like, at this point, to propose and define two new terms. The first is a name for our plan as a whole—we should like to call it the "average-fee plan." We recognize that our plan is, in essence, only a combination of an existing kind of health insurance with the application and extension of an already existing economic trend in medicine. We believe, however, that it is enough of an innovation to merit a name of its own, and the term we propose—the average-fee plan—seems to us to be most descriptive. The second term is a new name for the kind of fee schedules upon whose formulation the average-fee plan depends. To us, the term "fee schedule" savors too strongly of the element of compulsory acceptance, and the essence of

the average-fee plan is its avoidance of compulsive uniformity. The term "fee schedule," too, seems to us to carry the implication of fees set from above rather than our procedure of beginning with the individual and working up to the top echelon from below. We envision first the individual setting his own fees, then the county formulating a schedule based on the average of these individual scales and finally the state devising a schedule which is a composite of county schedules. For these kinds of schedule, we propose the term "fee lists," and we shall hereafter use that term to differentiate a fee schedule used in this manner from schedules otherwise applied.

RECOMMENDATIONS

We are now ready to specify the steps which we believe best will apply our conclusions. Our recommendations are divided into those whose implementation is a function of the medical profession, either as individuals or as it is organized in county medical societies and the California Medical Association, and those which concern California Physicians' Service.

First, our recommendations for steps which the medical profession should take:

1. Each individual physician shall be urged to accept the principle of individual uniformity of fees, and to formulate an individual fee list to which, in the absence of agreement with his patient to do otherwise, he will adhere.

2. Each component county medical society of the California Medical Association or its branches shall be urged to formulate, and regularly revise, a fee list whose basis shall be the average fee charged the average patient by the average physician in its county.

3. The California Medical Association shall formulate a state fee list, which shall be a composite of county lists, and which may be adopted by any county as its list in lieu of a locally determined one. The purpose of county and state fee lists shall be to serve as guides to insurers in formulating realistic indemnity schedules.

4. The California Medical Association shall establish machinery on a statewide or regional basis to handle fee complaints, which machinery shall be available to all patients whether or not they hold health insurance and, if they do, irrespective of the identity of the insurer.

5. The measure of the legitimacy of a fee complaint shall be: Whether or not the fee is consistent with the individual fee list of the physician concerned; and, if the fee charged is a departure from the physician's fee list, whether or not there had been prior agreement to this departure.

6. The fee complaint machinery shall include a

mechanism for enforcement of decisions, which mechanism specifically shall include the provision of expert testimony by the fee complaint committee in any litigation to force payment of a fee upon whose legitimacy the committee has ruled.

7. The California Medical Association and its component county medical societies shall initiate and maintain a continuous program of public education covering the following general points:

(a) The fairness of hospital costs and medical fees.

(b) The mirage of full-coverage health insurance; why it is that the individual will pay less for care of minor illness if he pays his doctor direct rather than through an insurance company; and why co-insurance is an essential part of good health insurance.

(c) The protection against the cost of serious illness which good indemnity-type health insurance can give, and the degree to which this type of health insurance protects normal, two-party relationships between the patient and his doctor.

(d) The fact that most physicians have an individual scale of fees upon which their charges for professional services are based. Information about this fee list is a legitimate query to be put in advance of accepting service.

(e) The existence of fee complaint machinery in California, and the procedure of appeal in cases of fees believed to be unreasonable.

(f) That, irrespective of the existence of individual fee lists, the medical profession adheres to its centuries-old responsibility to furnish medical care regardless of ability to pay, and that patients should discuss their economic as well as their medical problems with their physicians.

8. The California Medical Association and its component county medical societies shall initiate and maintain a continuous program of *professional* education on the following general points:

(a) That indemnity-type health insurance is best for both patient and physician, but that it can be made to work only if each physician forego the traditional practice of setting his fee on the basis of ability to pay and, instead, accept the trend toward, and adopt, the principle of a uniform, individual fee list.

(b) That the individual fee list will serve its purpose only if both its existence and its level are known to the patient; and that it is the physician's responsibility to inform his patient of these facts.

(c) That the fee list will fail to serve its purpose unless it be adhered to irrespective of the possession by the patient of health insurance.

(d) That no form of voluntary health insurance can succeed unless the physician cooperate to eliminate abuse and overuse; the physician must forever

remember that, whether the check he receives be signed by insurance company or patient, it is the patient's money that is paying the whole bill.

9. County medical societies shall be encouraged to authorize and approve the arrangement of agreements between groups of physicians on one hand and insured groups on the other whereby the cooperating physicians agree to furnish care to members of the insured groups at rates for professional charges fixed by the community fee list. To be eligible for approval by any component county society, such an arrangement must be open to participation by all physicians, and must be under an insurance contract whose provisions meet such standards as the California Medical Association shall from time to time determine.

These, then, are your committee's recommendations for the steps we believe the medical profession must take if sound voluntary health insurance is to be. Their effect should be to create an environment in which voluntary health insurance may grow to a stature which will make unnecessary any form of state-managed, compulsory health insurance.

It should at this point be clear that we regard this problem of health insurance as one whose solution is a task for the medical profession as a whole, and not one which may be handed to California Physicians' Service with the demand that that organization find the answers. As Dichter implies, that kind of past action has made C.P.S. the whipping boy who has had to take the punishment which should instead have been visited on all of us.

We should emphasize, too, that the recommendations so far made do not limit the cooperation of the medical profession to that with any specific insurer. Your committee believes that our profession must take the position that the field of health insurance underwriting is open to any reputable insurance company whose insurance plan and operations meet reasonable standards which are equally applicable to all.

Your committee, however, reaffirms its belief (stated in its interim report) that the organized medical profession must maintain an instrument in the field of health insurance. Our reasons for so deciding we believe remain valid, whatever the type of health insurance is decided to be best for patient and physician. It remains, then, for us to decide what role this, our instrument, should play, and how it should be organized and function best to fulfill its assigned mission.

The primary decision to be made is the answer to the question all of us have so many times asked ourselves: What is the objective of California Physicians' Service? In our interim report, we gave a four-point objective to which, within its limitations, we still subscribe. But those points might better be

considered as purposes rather than an objective. We should now be ready to broaden, and at the same time to condense, that statement of purposes to this single sentence: "The objective of California Physicians' Service shall be to serve as the instrument by which the organized medical profession of California can fulfill its obligation to lead in devising sound ways to apply the insurance method to the costs of private medical care."

There are two big problems of California Physicians' Service which can now be examined in terms of this objective: (1) Better integration of C.P.S. with the California Medical Association and (2) conversion of its insurance program to one which is consistent with the conditions we have described as those which we believe sound health insurance must meet.

A good step toward this integration has already been taken by adding three councilors of the C.M.A. to the Board of Trustees of C.P.S. But, more obviously to indicate that C.P.S. is truly a member of the family of organized medicine and, at the same time, to lessen confusion and streamline operations, your committee recommends that the C.P.S. House of Delegates be abolished, and that all its functions be transferred to the House of Delegates of the California Medical Association. For the same reasons, we further recommend that the Council of the C.M.A. act as a nominating committee for C.P.S. trustees, and that nomination of trustees be made sufficiently far in advance of election to allow time for adequate consideration by the House. We are informed by legal counsel that both these recommendations are possible of accomplishment.

The problem of conversion of the C.P.S. insurance program is more complicated. Anyone who assumes the task of advocating change must remember that California Physicians' Service is a going concern that has done a truly good job in the face of many difficulties. It still remains the largest individual carrier of health insurance in California, with commitments far into the future. And, most importantly, it still is "the doctors' plan."

In the light of these considerations, we recommend that California Physicians' Service organize a subsidiary corporation, qualified under the insurance laws of California to write indemnity type health insurance.

By recommending a separate program operating under a subsidiary corporation, and thus not affecting present C.P.S. operations, we believe that the average-fee plan will have a chance for gradual evolution as its practical problems become demonstrated by experience. If the future substantiates our belief that the average-fee plan will more nearly meet the criteria of good health insurance for both patient and physician, gradual conversion of the

C.P.S. program to that plan will be both sound and automatic. At the same time, this method of parallel operation of both indemnity- and service-type plans will avoid the dislocation of a sudden alteration in C.P.S. policy, and, if conversion to the average-fee plan eventually does occur, it will be to a tried and proven insurance program.

These, then, are our major recommendations. May we point out, too, that we are only recommending, and that the full implementation of our recommendations is contingent upon many separate decisions and activities, each of which is a problem by itself. The success of the program we propose will be the sum of the wisdom of these decisions, and the energy with which their objective is pursued.

We of your committee believe strongly that it is neither impractical nor utopian to base the ideal plan of health insurance on the certainty of adherence by the medical profession to the fundamental principle of ethics that the welfare of the patient is the first concern of medicine. We are confident that the result of the application of our conclusions and recommendations will vindicate and confirm that belief.

SPECIFIC RECOMMENDATIONS

(See action on recommendations, page 79)

Your committee recommends:

1. That the House of Delegates of California Physicians' Service be abolished and its functions be transferred to the House of Delegates of the California Medical Association.

2. That the Council of the California Medical Association serve as the nominating committee for California Physicians' Service Trustees.

3. That the Board of Trustees of California Physicians' Service organize and finance a subsidiary non-profit corporation qualified under the insurance laws of California to write indemnity-type health insurance.

4. That each individual physician be urged to accept the principle of individual uniformity of fees, and to formulate an individual fee-list to which, in the absence of agreement with his patient to do otherwise, he will adhere.

5. That each component county medical society of the California Medical Association or its branches be urged to formulate and regularly revise a fee list whose basis shall be the average fee charged the average patient by the average physician in its county.

6. That the California Medical Association formulate a state fee list, which shall be a composite of county lists, and which may be adopted by any county as its list in lieu of a locally determined one. The purpose of county and state fee lists shall be to serve as guides to insurers in formulating realistic indemnity schedules.

7. That the California Medical Association establish machinery on a statewide or regional basis to handle fee-complaints, which machinery shall be available to all patients whether or not they hold health insurance and, if they do, irrespective of the identity of the insurer.

8. That the measure of the legitimacy of a fee-complaint shall be: Whether or not the fee is consistent with the individual fee-list of the physician concerned; and, if the fee charged is a departure from the physicians' fee-list, whether or not there had been prior agreement to this departure.

9. That the fee-complaint machinery include a mechanism for enforcement of decisions, which mechanism specifically shall include the provision of expert testimony by the fee-complaint committee in any litigation to force payment of a fee upon whose legitimacy the committee has ruled.

10. That the California Medical Association and its component county medical societies initiate and maintain a continuous program of public education covering the following general points:

(a) The fairness of hospital costs and medical fees.

(b) The mirage of full-coverage health insurance; why it is that the individual will pay less for care of minor illness if he pays his doctor direct rather than through an insurance company; and why co-insurance is an essential part of good health insurance.

(c) The protection against the cost of serious illness which good indemnity-type health insurance can give, and the degree to which this type of health insurance protects normal, two-party relationships between the patient and his doctor.

(d) The fact that most physicians have an individual scale of fees upon which their charges for professional services are based. Information about this fee-list is a legitimate query to be put in advance of accepting service.

(e) The existence of fee-complaint machinery in California, and the procedure of appeal in cases of fees believed to be unreasonable.

(f) That, irrespective of the existence of individual fee-lists, the medical profession adheres to its centuries-old responsibility to furnish medical care regardless of ability to pay, and that patients should discuss their economic as well as their medical problems with their physicians.

11. That the California Medical Association and its component county medical societies initiate and maintain a continuous program of *professional* education on the following general points:

(a) That indemnity-type health insurance is best for both patient and physician, but that it can be made to work only if each physician forego the traditional practice of setting his fee on the basis of

ability to pay and, instead, accept the trend toward, and adopt, the principle of an individual fee-list.

(b) That the individual fee-list will serve its purpose only if both its existence and its level are known to the patient; and that it is the physician's responsibility to inform his patient of these facts.

(c) That the fee-list will fail to serve its purpose unless it be adhered to irrespective of the possession by the patient of health insurance.

(d) That no form of voluntary health insurance can succeed unless the physician cooperate to eliminate abuse and overuse; the physician must forever remember that, whether the check he receives be signed by insurance company or patient, it is the patient's money that is paying the whole bill.

12. That county medical societies be encouraged to authorize and approve the arrangement of agreements between groups of physicians on one hand and insured groups on the other, whereby the cooperating physicians agree to furnish care to members of the insured groups at rates for professional charges fixed by the community fee list. To be eligible for approval by any component county society, such an arrangement must be open to participation by all physicians, and must be under an insurance contract whose provisions meet such standards as the California Medical Association shall from time to time determine.

13. That the objective of California Physicians' Service shall be to serve as the instrument by which the organized medical profession of California can fulfill its obligation to lead in devising sound ways to apply the insurance method to the costs of medical care.

14. Finally, that in acting on the report of this committee, the House of Delegates by vote express its opinion on each of the above recommendations, and that, for the purpose of consideration of each subject as a whole and avoidance of inconsistent action, the House vote on the various recommendations in the following groupings:

1. Recommendations one and two.
2. Recommendation three.
3. Recommendations four, five, and six.
4. Recommendations seven, eight, and nine.
5. Recommendations ten and eleven.
6. Recommendation twelve.
7. Recommendation thirteen.

That those recommendations voted on favorably by the House and requiring implementation be considered and deemed referred to the Council and to the Board of Trustees of California Physicians' Service for such action by either body as may be proper or for return to the House of Delegates with specific proposals for implementation if it be necessary that the House act thereon.

ACTION BY HOUSE OF DELEGATES

The first three of the specific recommendations were passed by the House of Delegates upon recommendation of Reference Committee No. 1 to which the entire report had been referred for consideration.

As to the specific recommendations Nos. 4 through 13, the report of Reference Committee No. 1, which was adopted by the House of Delegates, was as follows:

"This Committee has reviewed recommendations 4 through 13 of the C.M.A.-C.P.S. Study Committee. This Committee is in agreement with these proposals in general but the Committee feels that these proposals entail some basic changes in the practice of medicine which should be discussed in the component county medical societies. We, therefore, feel that no action should be taken on these matters at the present time. We recommend that each delegate submit these proposals to his county medical society for discussion at the earliest opportunity.

"It is the opinion of this Committee that any local county medical society could institute this program in its own society at any time should it wish to do so.

This Committee feels that specific action on these recommendations by the House of Delegates of the California Medical Association at this time would be premature and should be delayed until the next session by which time each component county medical society will have had ample time to study and discuss the proposals and to instruct its delegates in what action it desires to have taken.

"Your Committee recommends to the Council that arrangements be made to provide speakers to local county medical societies on the subject of the C.M.A.-C.P.S. Study Committee Report if any local county medical society requests such additional clarification.

"The Committee invites any comment, discussion, or constructive criticism of the C.M.A.-C.P.S. Study Committee Report between now and the next session of the House of Delegates, at which time this committee will submit its final report."

NOTE: Please address all communications to the chairman of Reference Committee No. 1—Douglass H. Batten, M.D., 233 A Street, San Diego.

Diagnosis and Detection

A Statement of Policy by the Cancer Commission of the California Medical Association

Diagnosis is the cornerstone of modern clinical medicine. It requires accurate observation and rational deduction. In its most complete form it is the process of identifying a disease by consideration of the history, symptoms, physical signs, and the results of every other type of examination of the patient. It includes differential diagnosis, and provides a basis for prognosis. Even in the best of circumstances, it may contain an element of uncertainty, so that diagnosis might be defined as "The procedure of reaching the most probable conclusion based on the facts at hand."

Detection is a step toward diagnosis. It is essentially the effort to discover evidence of disease in persons both asymptomatic and symptomatic. Detection requires accurate observation and rational deduction. The clinician detects and evaluates abnormal physical signs; the pathologist detects and evaluates an abnormality in a cell under the microscope; the radiologist detects and evaluates an abnormal shadow in an x-ray film.

Diagnostic and detection procedures may be performed on an individual basis or on a mass basis. They are performed on an individual basis in everyday clinical office and hospital practice. They are performed on a mass basis in military induction stations, large educational and business establishments, and in certain clinics and institutions.

There are now modern techniques at the disposi-

tion of the medical profession by which shortcuts may be made in diagnosis. These include certain serological tests for syphilis, cutaneous tests for tuberculosis, x-ray tests for pulmonary disease and cytologic tests for neoplastic disease. All of these tests require the use of various types of laboratory equipment, the cooperation of technicians, and the *interpretation by physicians*. For example, a chest x-ray does not read itself; it requires interpretation by a trained physician; interpretation of a chest film for the purposes of reaching a decision as to whether or not disease appears to be present is a part of diagnosis. That is, a chest x-ray or a vaginal smear for screening or survey purposes is a *diagnostic procedure*.

It is essential for maintenance of quality in medical programs that members of organizations such as the American Cancer Society keep in mind the fact that there is no distinction between diagnosis and detection when the objective of the procedure is the identification of health or disease. Detection procedures are fundamentally medical procedures which should be performed by or under the direction of physicians, and which require supervision and interpretation by physicians. Confusion has been created in the past by referring to detection methods as non-diagnostic or non-professional procedures. Anyone who has seen the distressing results of misinterpretation of chest films and cytologic smears is doubly conscious of the need for emphasizing that detection is a part of diagnosis, and not some mechanical or technical process which can safely be relegated to lay persons.

Council Meeting Minutes

Tentative Draft: Minutes of the 396th Meeting of the Council, San Francisco, November 15-16, 1952.

The meeting was called to order by Chairman Shipman at 9:30 a.m., Saturday, November 15, 1952, in Room 220 of the Hotel St. Francis, San Francisco.

Roll Call:

Present were President Alesen, President-elect Green, Speaker Charnock, Vice-Speaker Bailey, Councilors West, Wheeler, Loos, Sampson, Morrison, Dau, Ray, Montgomery, Bostick, Pollock, Frees, Carey, Shipman, Varden, Heron and Lum, and Secretary Daniels. Councilor Kirchner was absent for cause on November 15 but present November 16.

Absent for cause: Editor Wilbur.

A quorum present and acting.

Present by invitation during all or a part of the meeting were Messrs. Hunton, Thomas, Gillette, Clancy and Pettis of C.M.A. staff, legal counsel Howard Hassard, county society executive secretaries Waterson, Watson, Nute, Thompson; Doctor Wilton L. Halverson, State Director of Public Health; Doctor Dwight H. Murray, legislative chairman; Doctor Francis T. Hodges, secretary of California Physicians' Service; Doctor Leslie B. Magoon of the C.P.S. Study Committee; Ned Burman of public relations counsel; Ben Read of the Public Health League of California; Doctor A. E. Larsen, medical director of C.P.S.; Doctor Frank Wilson, director of the Washington office of the American Medical Association, Doctors H. Gordon MacLean and Berthel Henning; Doctors Earl Longley and Emil Gough of the San Joaquin County Medical Society; Mr. T. D. O'Dea and Mr. Marshall Virello of C.P.S.

1. Minutes for Approval:

(a) On motion duly made and seconded, minutes of the 395th Council meeting, held September 6, 1952, were approved.

(b) On motion duly made and seconded, minutes of the 234th meeting of the Executive Committee, held October 19, 1952, were approved, it being noted that the Council gave more than a three-fourths vote of approval to the appropriation of funds for office improvements.

2. Membership:

(a) A report of membership as of November 14, 1952, was presented and ordered accepted.

(b) On motion duly made and seconded, 136 delinquent members whose dues had been received were voted reinstatement as active members.

(c) On motion duly made and seconded, in each instance, 11 applicants were granted Associate Mem-

bership. These were: Velva V. Brown, Samuel N. Etheredge, Gerald Hirschber, Frank Moore, Jr., and Nadine Foreman, Alameda-Contra Costa; Stephen Cheu, Isle Vivien Collet, Thomas Fuson, and Jerome Radding, Fresno County; Joseph J. A. McMullin, Riverside; Thelma M. Quinn, Santa Clara County.

(d) On motion duly made and seconded in each instance, five applicants were granted Retired Membership. These were: James H. McGranahan, Joseph H. Robinson, and Herbert A. Rosenkranz, Los Angeles; Earl N. Greenwood, San Francisco; Franz Gehrels, San Mateo.

(e) On motion duly made and seconded in each instance, reduction of dues because of illness or post-graduate study was granted seven members.

3. Veterans' Problems:

Dr. Berthel Henning, by invitation, discussed some problems confronting the American Legion in looking after the interests of veterans and suggested the Association maintain a committee to discuss such matters with the American Legion. It was agreed such a committee be appointed by the chairman.

4. C.P.S. Study Committee:

Dr. Wilbur Bailey, chairman of the C.P.S. Study Committee, reported on considerations recently given several items by the committee. He suggested a basic contract by C.P.S. to eliminate many public and administrative problems now arising from a multiplicity of outstanding contracts. He also suggested that patients be advised on the sums paid to physicians and that a closer liaison be maintained between C.P.S. and the C.M.A.

Dr. Leslie Magoon, a member of the committee, presented the tentative final report of the committee and suggested it be placed before the Interim Session of the House of Delegates, to lie on the table for action at the 1953 Annual Session.

On motion duly made and seconded, it was voted that the Council accept the report presented by Dr. Magoon, authorize the committee to review, condense, modify, if desired, and generally put it into proper form for presentation to the House of Delegates and provide copies for distribution after the report has been delivered.

5. Medical Services Commission:

Dr. Leslie Magoon, chairman of the Medical Services Commission, reported the commission is working on several matters concerning the establishment of objectives and machinery for implementing them. Dr. Bailey suggested that the files and other material of the C.P.S. Study Committee be turned over to the Medical Services Commission.

6. *California Physicians' Service:*

Dr. Francis T. Hodges, secretary of California Physicians' Service, reported that C.P.S. was working on uniformity in its contracts, had revoked the physician memberships of five physicians and had approved the payment of a brokerage fee in certain instances. As of September 30, 1952, he reported 672,524 beneficiary and 10,956 physician members.

Mr. Thomas D. O'Dea, at the invitation of Chairman Shipman, discussed the enrollment problems facing California Physicians' Service.

7. *Financial:*

A report on bank balances as of November 14, 1952, was presented and ordered filed.

8. *Disciplinary Proceedings:*

(a) A report from the Los Angeles County Medical Association, relating to the expulsion of a member following a disciplinary hearing, was presented and ordered filed.

(b) Mr. Hassard presented suggested by-law amendments which would create Judicial Councils in the larger county societies for the sole purpose of handling all disciplinary proceedings. On motion duly made and seconded, it was voted to place these amendments before the Interim Session of the House of Delegates.

9. *C.P.S. Fee Schedule Committee:*

After discussion, it was agreed that the work of the C.P.S. Fee Schedule Committee should be integrated with the Medical Services Commission and that a vacancy on the committee remain unfilled at this time.

10. *Committee on Public Health and Public Agencies:*

Dr. Wilton L. Halverson, State Director of Public Health, reported on a meeting held by representatives of his department with Drs. West, Loos and Carey, members of the Committee on Public Health and Public Agencies, on November 13. Dr. West then presented the subjects under discussion.

(a) On motion duly made and seconded, it was voted to refer to the Committee on Public Policy and Legislation and to the public relations department proposed legislation to promote better control of rabies through dog licensing, safeguards within dog pounds, tagging of rabies-inoculated dogs and other measures.

(b) Discussion was held on proposed amendments to the Agriculture Code to prohibit the sale of raw milk except where cows' milk is certified or goats' milk guaranteed. On motion duly made and seconded, it was voted to approve such amendments in principle, subject to their being submitted to the legislative and public relations committees.

(c) It was agreed to ask the Committee on Rural Health to make plans for meeting with boards of supervisors and other officials in order to effectuate better public health measures in some rural "play-ground areas" where full-time public health departments are not maintained and where seasonal visitors create sanitation and other public health problems.

(d) Discussion was held on the Crippled Children's Program, especially with a view toward Dr. Halverson's expressed wish for a complete decentralization and county administration of the plan. Mention was made of interim committees in both the State Senate and the Assembly, studying this matter.

(e) Mr. Hassard and Dr. Halverson discussed the present clinic licensing law and suggested amendments to modernize the law and to provide a greater effectiveness of administration in those offices which should be within the scope of this law.

(f) It was agreed to refer to the legislative committee some proposed amendments to the laws governing the use of animals in medical research.

(g) On motion duly made and seconded, it was voted to request the officers of the appropriate scientific sections to cooperate with the Department of Public Health in effecting changes which would permit the use of additional medications in treating the eyes of the newborn.

11. *Legal Department:*

Mr. Hassard reported that briefs are being prepared in the appeal of the San Diego litigation and that oral arguments before the appeals court will probably not be scheduled until next summer. He also reported on a correction in testimony which has been forwarded to the President's Commission on the Health Needs of the Nation. Mr. Hassard also stated that a chiropractic initiative measure is now being circulated and may qualify for the 1954 general election ballot or an earlier special election should such be called.

12. *Public Relations:*

Mr. Clancy urged a closer liaison between the Association and C.P.S., especially in matters of public relations and advertising. On motion duly made and seconded, it was voted to call this to the attention of the Board of Trustees of C.P.S.

13. *Advisory Planning Committee:*

Mr. Hunton reported on the meeting of the Advisory Planning Committee held November 13. A closer liaison with C.P.S. was agreed upon as a necessity at that time. The committee also agreed that the public relations and advertising aids produced by the Association, with the cooperation of the Advisory Planning Committee, should be offered

equally to all county societies but that projects of a local nature should remain the responsibility of the county society itself. Mr. Hunton also discussed a "Health Record" pamphlet which has been devised for offering to parents for the maintenance of a health record on their children. Members of the Advisory Planning Committee are discussing this pamphlet with their respective county societies, with a view toward distribution of the pamphlet when and if it is approved.

14. *Benevolence Committee:*

On motion duly made and seconded, it was voted to approve the proposed policy of the Benevolence Committee which would provide for the contribution of funds on the basis of individual case requirements, with the understanding that state old-age funds would be sought by all those eligible to receive them.

15. *A.M.A. Judicial Council:*

On motion duly made and seconded, it was voted to request the president to confer with the Judicial Council of the American Medical Association on rulings recently handed down by that body on the question of contact with practitioners of other healing arts.

16. *Physician Placements:*

Discussion was held on a proposal of the Santa Clara County Medical Society for the location of physicians in rural areas. On motion duly made and seconded, it was voted to refer this matter to the Committee on Rural Health.

17. *Committee on Industrial Accident Commission:*

Mr. Hassard reported that a new petition has been filed with the Industrial Accident Commission on behalf of the Association, asking for the assumption of authority to make and enforce a medical and surgical fee schedule and offering such a schedule for consideration.

18. *Cancer Commission:*

Report was made on several so-called cancer cures for which the authors make claims not adequately supported by scientific evidence. On motion duly made and seconded, it was voted to request the Cancer Commission to accept jurisdiction in cases of this character, to study the material submitted and to make reports on its findings.

19. *Association Mailing List:*

It was moved, seconded and voted to refer to a special committee of Drs. Arthur Kirchner and L. A. Alesen the question of reviewing an insurance policy

whose underwriters seek to use the Association's mailing list in soliciting business.

20. *California Medicine:*

On motion duly made and seconded, it was voted to appoint Dr. James E. Reeves of San Diego and Dr. John G. Walsh of Sacramento as members of the Editorial Board of CALIFORNIA MEDICINE, representing general practice.

21. *Public Policy and Legislation:*

Mr. Ben Read and Dr. Dwight H. Murray reported on the recent state and national elections. It was agreed that Dr. Murray's committee would meet shortly with Dr. Bullock's special Committee on Psychology and it was regularly moved, seconded and voted that Dr. Bullock attend the A.M.A. Interim Session in Denver, to confer with a committee studying the problem of licensing or registering psychologists.

On motion duly made and seconded, it was voted to express to the family of the late Dr. Anthony B. Diepenbrock the extreme appreciation of the Association of the valuable contribution made by him as a member of the Committee on Public Policy and Legislation and in other Association activities.

22. *Doctor Draft Law:*

Dr. West called attention to some of the provisions of the present "Doctor Draft Law" which are discriminatory against certain physicians whose war-time service is not now recognized as credit in determining their position in Selective Service. Mr. Hunton was instructed to take up this matter with the Washington office of the American Medical Association.

23. *General Practitioner of the Year:*

On motion duly made and seconded, it was voted to submit to the American Medical Association the name of Dr. C. C. Violette of Santa Ana as a nominee for selection as the General Practitioner of the Year.

24. *Committee on Problems of the Aging:*

On motion duly made and seconded, it was voted to appoint Dr. Douglas G. Campbell, chairman, and Drs. Elizabeth Mason Hohl and Howard Naffziger members of a special committee on Problems of the Aging.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 5:45 p.m., Sunday, November 16, 1952.

SIDNEY J. SHIPMAN, M.D., *Chairman*
ALBERT C. DANIELS, M.D., *Secretary*

In Memoriam

BLATHERWICK, ALEX A. Died in Los Angeles, November 1, 1952, aged 71, of cerebral thrombosis. Graduate of Rush Medical College, Chicago, Illinois, 1909. Licensed in California in 1911. Doctor Blatherwick was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



CLEAVE, DAVID C. Died in San Francisco, September 27, 1952, aged 47, of coronary infarction. Graduate of the University of California School of Medicine, Berkeley-San Francisco, 1931. Licensed in California in 1931. Doctor Cleave was a member of the Monterey County Medical Society, the California Medical Association, and the American Medical Association.



CONLEY, WILLARD T. Died in Los Angeles, November 15, 1952, aged 67, of terminal pneumonia. Graduate of Northwestern University Medical School, Chicago, 1913. Licensed in California in 1928. Doctor Conley was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



DELAHOUSAYE, ALTHEMUS J., JR. Died in Riverside, November 2, 1952, aged 34. Graduate of Howard University College of Medicine, Washington, D. C., 1942. Licensed in California in 1950. Doctor Delahoussaye was a member of the Riverside County Medical Association, the California Medical Association, and the American Medical Association.



EMERSON, MARK L. Died in Oakland, November 11, 1952, aged 80, of thrombosis in the coronary artery. Graduate of the University of California School of Medicine, Berkeley-San Francisco, 1899. Licensed in California in 1902. Doctor Emerson was a member of the Alameda-Contra Costa Medical Association, the California Medical Association, and the American Medical Association.



GLENN, ROBERT A. Died in Oakland, November 13, 1952, aged 65, of nephrosis, atherosclerosis and hypertension. Graduate of the University of Pennsylvania, School of Medicine, Philadelphia, 1911. Licensed in California in 1915. Doctor Glenn was a member of the Alameda-Contra Costa Medical Association, the California Medical Association, and the American Medical Association.



HARRIS, FRANKLIN I. Died in Palo Alto, November 13, 1952, aged 57, of coronary thrombosis. Graduate of the University of California School of Medicine, Berkeley-San Francisco, 1921. Licensed in California in 1921. Doctor Harris was a member of the San Francisco Medical Society, the California Medical Association, and the American Medical Association.



HOPKINS, MARK F. Died in San Jose, October 28, 1952, aged 74, of coronary artery disease. Graduate of the College of Physicians and Surgeons, 1903. Licensed in California in 1903. Doctor Hopkins was a retired member of the Santa Clara County Medical Society, the California Medical Association, and an associate member of the American Medical Association.

McGREER, CHARLES F. Died in Martinez, November 14, 1952, aged 45, of recurrent coronary thrombosis, due to coronary arteriosclerosis. Graduate of Stanford University School of Medicine, Palo Alto-San Francisco, 1942. Licensed in California in 1942. Doctor McGreer was a member of the Alameda-Contra Costa Medical Association, the California Medical Association, and the American Medical Association.



MELLINGER, HERBERT V. Died October 28, 1952, aged 73. Graduate of Rush Medical College, Chicago, Illinois, 1906. Licensed in California in 1919. Doctor Mellinger was a retired member of the Los Angeles County Medical Association, and the California Medical Association.



MIZE, GUY H. Died October 14, 1952, aged 70. Graduate of Cooper Medical College, San Francisco, 1906. Licensed in California in 1906. Doctor Mize was a retired member of the San Francisco Medical Society, and the California Medical Association.



MOKLER, VICTOR A. Died in Los Angeles, November 2, 1952, aged 60, of coronary occlusion. Graduate of Creighton University School of Medicine, Omaha, Nebraska, 1915. Licensed in California in 1941. Doctor Mokler was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



MURRAY, JOHN J. Died in Glendale, November 2, 1952, aged 54. Graduate of Deutsche Universität Medizinische Fakultät, Prague, Czechoslovakia, 1923. Licensed in California in 1940. Doctor Murray was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



QUINN, VINCENT J. Died in Los Angeles, November 8, 1952, aged 49, after being shot by a rampaging assailant who did not know him. Graduate of St. Louis University School of Medicine, Missouri, 1927. Licensed in California in 1928. Doctor Quinn was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



SPENCER, ALFRED C. Died October 23, 1952, aged 50. Graduate of the University of Nebraska College of Medicine, Omaha, Nebraska, 1932. Licensed in California in 1932. Doctor Spencer was a member of the San Francisco Medical Society, the California Medical Association, and the American Medical Association.



WALKER, GEORGE W. Died in Pacific Grove, November 1, 1952, aged 76. Graduate of Barnes Medical College, St. Louis, Missouri, 1897. Licensed in California in 1901. Doctor Walker was a retired member of the Fresno County Medical Society, the California Medical Association, and an associate member of the American Medical Association.

NEWS & NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

Dr. John W. Gofman, associate professor of medical physics, University of California, Berkeley, was one of ten recipients of *Modern Medicine* Awards for Distinguished Achievement for 1953. Dr. Gofman was recognized for studies on the part lipoproteins play in the cause of atherosclerosis, said Dr. Walter C. Alvarez, editor-in-chief of *Modern Medicine*, who announced the awards.

FRESNO

Officers of the Fresno County Medical Society for 1953 are: President, Dr. William N. Knudsen; president-elect, Dr. Fred E. Cooley; vice-president, Dr. C. H. Covington; secretary-treasurer, Dr. Joseph Logan. Dr. Knudsen succeeded Dr. Kendall B. Holmes as president.

LOS ANGELES

The Fifth Annual Mid-Winter Radiological Conference sponsored by the Los Angeles Radiological Society will be held at the Ambassador Hotel, Los Angeles, Saturday and Sunday, February 21 and 22, 1953. Out-of-state speakers will be Dr. Fred J. Hodges, Dr. H. Dabney Kerr and Dr. Ira H. Lockwood.

A banquet preceded by cocktails will be held at the Ambassador Hotel on Saturday evening, February 21. Hotel reservations should be made as soon as possible through the Convention Manager, Ambassador Hotel, Los Angeles.

Conference reservations may be made through Dr. M. M. Haskell, 615 Times Building, Long Beach 2, California. The Conference fee is \$20 and dinner will be \$6 per plate. Courtesy cards are available to radiological residents and radiologists in military service by pre-registration.

At the November meeting the following officers of the Los Angeles Radiological Society for the coming year were elected: president, Dr. John B. Hamilton, Glendale; vice-president, Dr. Walter L. Stilson, Los Angeles; secretary, Dr. Joseph F. Linsman, Beverly Hills; treasurer, Dr. M. M. Haskell, Long Beach. Dr. Harold P. Tompkins, Los Angeles, was elected to the executive committee.

* * *

The Second Annual Obstetrical Gynecological Forum, sponsored by the Los Angeles Obstetrical Gynecological Society, will be held at the Elks Club on February 14 and 15. All interested, licensed physicians are welcome. An outstanding program by prominent authorities, including N. S. Assali of Cincinnati, Bayard Carter of Durham, M. Edward Davis of Chicago, Ludwig Emge of San Francisco, and Robert H. Williams of Seattle is planned. Physicians in general practice will receive credit from their Academy for attending this symposium.

Reservations may be made with Dr. John Gaspar, 6253 Hollywood Boulevard, Hollywood.

The Research Study Club of Los Angeles has announced its 22nd annual mid-winter clinical convention in ophthalmology and otolaryngology will be held in Los Angeles January 19-30. A special course in surgery of the eye will be given January 23-25. Guest lecturers for the ear-nose-throat section will be Dr. James H. Maxwell, Ann Arbor, Michigan, and Dr. Harry P. Schenck, Philadelphia; and for the eye section, Dr. Ramon Castroviejo of New York City, Dr. Alfred Edward Maumenee, Jr., of San Francisco, and Dr. Meyer Wiener of Coronado. Dr. Wiener will conduct the course on surgery of the eye, which is limited to 24 students.

Further information may be obtained from Dr. Pierre Violé, 1930 Wilshire Boulevard, Los Angeles 5.

* * *

Dr. Paul D. Foster was elected president of the Los Angeles County Medical Association in elections held late last year. Dr. Foster, secretary last year, succeeds Dr. Wilbur Bailey, who was elected trustee of the association. Others elected for 1953 are Dr. Verne C. Crawl, vice-president, and Dr. Ewing L. Turner, secretary-treasurer.

* * *

Dr. Duane W. Bradley of Kelseyville was elected president of the Mendocino-Lake County Medical Society for 1953 at a recent meeting of the organization, and Dr. James B. Massengill of Ukiah, who was president last year, was elected vice-president. Dr. Olga Miller of Talmage was elected secretary-treasurer.

SAN DIEGO

Medical veterans of San Diego County organized themselves into the San Diego County Medical Veterans Society on December 11, 1952. Officers pro tem are: President, Dr. Roy S. Averill; vice-president, Dr. Ira H. Wilson, treasurer, Dr. Gordon D. Skeoch; recording secretary, Dr. Wilton M. Lewis; corresponding secretary, Dr. Clifford L. Graves.

Purpose of the organization is to have a voice in the drafting of the new law that will take the place of Public Law 779 on July 1, 1953. Other activities will depend on developments.

The organizational meeting was addressed by A.M.A. Delegate Sam J. McClendon, Procurement and Assignment Committee Chairman Chester O. Tanner, and A.M.A. Alternate Delegate John B. Price of Santa Ana.

SAN FRANCISCO

Dr. Edmund J. Morrissey, president-elect of the San Francisco Medical Society in 1952, has been installed as president for 1953. Dr. Samuel R. Sherman was elected president-elect, Dr. Helen Starbuck vice-president, Dr. Herbert C. Moffitt, Jr., secretary-treasurer and Dr. Robert C. Combs assistant secretary-treasurer.

* * *

The Bay Area Society of Physical Medicine and Rehabilitation held its initial meeting on November 20, 1952, at Letterman Army Hospital. At present the membership is restricted to physicians specializing in this field. Future meetings will be held the third Thursday evening of each month.

* * *

The annual dinner meeting of the San Francisco Chapter of the Pan American Medical Association, honoring the San Francisco Consular Corps and visiting Latin Amer-

ican physicians and students, was held at the Bohemian Club, December 6, 1952. Dr. Charles Pierre Mathé, trustee of the medical organization, presented the society's words of greeting and the Hon. Sr. Carlos H. Palmieri, Consul General of Guatemala, responded. Dr. Robert T. Legge, Professor Emeritus of Hygiene, University of California, spoke on "Occupational Diseases."

The outgoing president of the San Francisco Chapter is Dr. Suren H. Babington. The newly elected officers are as follows: President, Dr. J. C. Geiger; first vice-president, Dr. Marius A. Francoz; second vice-president, Dr. Berthel H. Henning; secretary, Dr. Ralph A. Reynolds; treasurer, Dr. Luis A. Chaparro.

* * *

Dr. William Barry Wood, Jr., Busch Professor of Medicine at Washington University School of Medicine, St. Louis, presented the thirteenth course of **Herzstein Medical Lectures** under the direction of Stanford University School of Medicine and the University of California School of Medicine, on December 8, 10 and 12 in Lane Hall. Dr. Wood's subject, "The Cellular Immunology of Acute Bacterial Infections," included lectures on "The Pathogenesis of Bacterial Pneumonia," "Surface Phagocytosis," and "The Cytodynamics of Bacteremia."

SAN MATEO

Officers of the **San Mateo County Medical Society** for 1953 are: President, Alf. T. Haerem of Redwood City; president-elect, Bradley C. Brownson of San Mateo; secretary-treasurer, Jackson T. Flanders of Redwood City. Dr. Haerem, president-elect in 1952, succeeds Dr. Dan W. Boudett as president, and Dr. Flanders fills the position occupied last year by Dr. Brownson.

SANTA CRUZ

Dr. Phillip E. Karleen of Soquel was elected president of the Santa Cruz County Medical Society at a recent meeting. He succeeds Dr. Jerome A. Ludden, Jr., of Watsonville. Dr. Samuel B. Randall was reelected secretary-treasurer.

GENERAL

Voicing concern over the "rapidly expanding and uncontrolled" use in California of electrical vaporizers for dispensing lindane insecticide in food establishments for control of flies and other insects, the State Board of Public Health recently went on record opposing the use of such devices. The Board urgently recommended that "electrical vaporizers dispensing lindane or other chlorinated hydrocarbons not be used in closed spaces where people sleep, work or where unpackaged food is exposed, and that extreme caution be exercised in the indoor dispersion of such chemicals by any means."

Dr. Wilton L. Halverson, State Director of Public Health, said the matter of lindane dispensers had confronted the Board for some time and that a study of the problem led to the conclusion that lindane dispensers should be used only under carefully controlled conditions or not at all. The California Conference of Local Health Officers has urged that steps be taken to curtail the present uncontrolled use of such devices. A great variety of lindane dispensers, many of inferior construction, are now in use, Dr. Halverson said.

POSTGRADUATE EDUCATION NOTICES

UNIVERSITY OF CALIFORNIA AT LOS ANGELES SCHOOL OF MEDICINE

UNIVERSITY OF SOUTHERN CALIFORNIA SCHOOL OF MEDICINE

COLLEGE OF MEDICAL EVANGELISTS

Fourth Annual Chest Disease Symposium

Dates: January 22 and 23, 1953, 9:00 a.m.-5:00 p.m.

Fee: \$25.00 (includes reception and dinner).

This course is open only to graduates of medical schools approved by the Council on Medical Education and Hospitals of the American Medical Association. The fee for the course is \$25.00, payable at the time of enrollment, either by check or money order made payable to the Regents of the University of California. (The Fourth Annual Chest Disease Symposium is presented through the cooperation of the Los Angeles County Tuberculosis and Health Association, the Los Angeles, California and American Trudeau Societies, and the American College of Chest Physicians and sponsored by the University of California at Los Angeles School of Medicine, University of Southern California School of Medicine and College of Medical Evangelists.)

Contact: Applications or requests for information concerning this course should be made to: Thomas H. Sternberg, M.D., Head of Postgraduate Instruction, Medical Extension, University of California, Los Angeles 24, California. Telephone: ARizona 7-4201 or BRadshaw 2-6192.

MEDICAL EXTENSION UNIVERSITY OF CALIFORNIA

Postgraduate Courses for 1953

Cardiovascular Diseases, February 2, 3, 4, 5, mornings. Fee \$25.00. Medical Center.

Electrocardiography, February 2, 3, 4, 5, afternoons. Fee \$25.00. Medical Center.

Pulmonary Function, February 6, 7, 8, all day. Fee \$50.00. Medical Center.

Course for General Practitioners, March 2 through 6, Mount Zion Hospital, San Francisco. Fee to be announced.

Symposia on Psychosomatic Medicine, Wednesday afternoons and evenings, March 11, 18, 25. Fee to be announced. Langley Porter Clinic, San Francisco.

Diagnostic Radiology, April 6, 7, 8, at Franklin Hospital, San Francisco. Fee to be announced.

Pediatric Conference, June 22 through 26. Fee to be announced. Medical Center.

Conference on General Surgery, June 15 through 19. Fee \$75.00. Medical Center.

Obstetrical and Gynecological Conference, September 2, 3, 4. Place and fee to be announced.

Ophthalmology (for specialists), September 14 through 19. Fee \$75.00. Medical Center.

Medicine for General Practitioners, September through November. East Oakland Hospital. Fee \$50.00.

Evening Lectures in Medicine, September through November. Fee \$50.00. Mills Memorial Hospital, San Mateo (probably).

Contact: All inquiries to be addressed to Stacy R. Mettier, M.D., Professor of Medicine, Head of Postgraduate Instruction, Medical Extension, University of California Medical Center, San Francisco 22.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

The Stanford University School of Medicine will offer the annual postgraduate conference in Clinical Ophthalmology from March 23 through 27, 1953. The program this year will be devoted to Ophthalmic Surgery.

Registration will be open to physicians who limit their practice to the treatment of diseases of the eye or eye, ear, nose and throat. In order to allow free discussion by members of the conference, registration will be limited to thirty physicians.

Instructors will be Dr. A. Edward Maumenee, Dr. Dohrmann K. Pischel, Dr. Jerome W. Bettman, Dr. Max Fine, Dr. Earle H. McBain, and Dr. Arthur J. Jampolsky.

Programs and further information may be obtained from the Office of the Dean, Stanford University School of Medicine, 2398 Sacramento Street, San Francisco 15, California.

UNIVERSITY OF SOUTHERN CALIFORNIA SCHOOL OF MEDICINE

Division of Medical Extension Education

No. 882—Essential Physics in Radiology

Dates: March 9, 1953, through April 10, 1953—Los Angeles County Hospital April 13, 1953 through May 25, 1953—Cedars of Lebanon Hospital.

Tuition: \$55.00.

Speakers: Robert E. Pugh, Jr., F.A.C.R. (Assoc.), Henry L. Jaffe, M.D.

Contact: Dr. Gordon E. Goodhart, Director, Medical Extension Education, 1200 North State Street, Los Angeles 33, Calif., CApital 4195.

THIRD ANNUAL POSTGRADUATE MEDICAL AND SURGICAL CONVENTION

Pioneer Memorial Hospital, Brawley

FRIDAY, FEBRUARY 27, 1953

MORNING—ENDOCRINE DISEASES

1. Gynecological Endocrinology—Dr. Charles E. McLennan, Professor of Obstetrics and Gynecology.
2. Management of Diabetic Patients—Dr. John A. Luetscher, Associate Professor of Medicine. Dr. George Bernard Robson, Associate Clinical Professor of Medicine.

3. Medical Problems of the Thyroid and Adrenal—Dr. John A. Luetscher, Dr. George Bernard Robson.

12 noon—Luncheon

AFTERNOON

1. Surgery of the Endocrine System—Dr. Victor Richards, Assistant Professor of Surgery.
2. Roundtable—Problems in Endocrinology—Dr. John A. Luetscher, Dr. Charles E. McLennan, Dr. Victor Richards, Dr. George Bernard Robson.

EVENING

Banquet—Address: Supervoltage Radiation in the Treatment of Cancer—Dr. Henry S. Kaplan, Professor of Radiology.

SATURDAY, FEBRUARY 28, 1953

MORNING

1. Surgery of the Esophagus and Stomach—Dr. Gunther W. Nagel, Clinical Professor of Surgery.
2. Diagnosis and Treatment of Lesions of the Colon—Dr. Russell R. Klein, Assistant Clinical Professor of Surgery.
3. X-ray Diagnosis of Gastrointestinal Diseases—Dr. Henry S. Kaplan.

12 noon—Luncheon

AFTERNOON

1. Surgery of the Biliary Tract and Pancreas—Dr. Victor Richards.
2. Roundtable—Gastrointestinal Hemorrhage—Dr. Russell R. Klein, Dr. John A. Luetscher, Dr. Henry W. Nagel, Dr. Victor Richards, Dr. George Bernard Robson.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES SCHOOL OF MEDICINE, Medical Extension

Postgraduate Course in Basic Neurology

Date: February 16 to June 8, 1953.

Fee: \$75.00.

Instructional Staff: Chairman, R. B. Livingston, M.D., Associate Professor of Anatomy and Physiology, University of California School of Medicine, Los Angeles; Horace W. Magoun, Ph.D., Professor of Anatomy and Chairman of the Department, University of California Medical School, Los Angeles; J. D. French, M.D., Associate Clinical Professor of Surgery, University of California Medical School, Los Angeles; Chief Neurosurgeon, Veterans Administration Hospital, Long Beach.

Contact: Thomas H. Sternberg, M.D., Head of Postgraduate Instruction, Medical Extension, University of California, Los Angeles 24, Calif.

Concerning

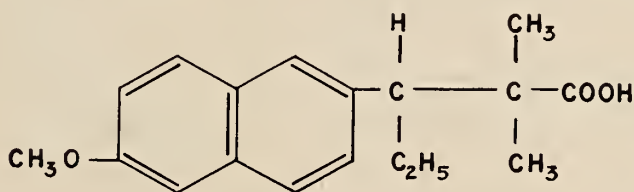
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(BRAND OF METHALLENESTRIL)

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Clinical evidence indicates that much estrogen therapy is accompanied by a high incidence of unfortunate side actions such as withdrawal bleeding, nausea and edema.

G. D. Searle & Co. presents VALLESTRIL



as an effective estrogenic substance with a *strikingly low incidence* of these undesirable side effects.

VALLESTRIL is only available in 3 mg. scored tablets. For treatment of the physiologic or artificial menopause—3 mg. (one tablet) twice daily for two weeks. Then a maintenance dose of one tablet daily for an additional month or longer if symptoms require continued administration.

**Trademark of G. D. Searle & Co.*

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FLAVICYL . . .

for prolonged, massive salicylate therapy

★FLAVICYL is a sodium-free protective analgesic used as a prolonged large-dosage therapeutic salicylate in rheumatic fever, rheumatic polyarthritis, rheumatoid arthritis, intraocular inflammation and other inflammatory conditions, headache, neuralgia and muscular pains.

★FLAVICYL provides the analgesic and antipyretic action of acetylsalicylic acids, the excretory retardation of Para-aminobenzoic Acid, the Vitamin-C conservation by Ascorbic Acid, and the protection against salicylate toxicity afforded by the flavinoids, Hesperidin and Rutin . . . all in balanced proportions.

formula: Each enteric coated Flavicyl tablet contains:

Acetylsalicylic Acid.....	300 mg.
PABA (para-aminobenzoic acid).....	150 mg.
Ascorbic Acid.....	20 mg.
Hesperidin	10 mg.
Rutin	10 mg.

packaged: Bottles of 100 or 1000 E. C. Tablets

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Say 70 Per Cent of Breast Cancer Cases Can Be Cured

Breast cancer in its early stages detected as a result of the presence of certain conditions and treated by the removal of the entire breast can be expected to yield a cure rate in excess of 70 per cent. This is the opinion of Drs. Calvin T. Klopp, John D. Hoyle and Brian B. Blades, associated with the department of surgery, and the cancer clinic of the George Washington University Medical School, Washington.

There are no symptoms of early breast cancer, the doctors wrote in a recent issue of the *Journal of the American Medical Association*. All positive findings are objective signs that can be either seen or felt.

Women and physicians can and should detect cancer of the breast in its early stages by being on the lookout for such conditions which may indicate its presence. These include: (1) persistent scaling of the nipple of the breast; (2) slight ulceration of the nipple; (3) a discharge from the nipple; (4) slight thickening of the breast; (5) a tiny lump in the breast; (6) slight thickening of the nipple, or (7) a nontender lump in the armpit.

"Breast cancer is often described as beginning as a lump, creating the impression that the cancer has been present for a short time prior to the appearance of the lump," the doctors stated. "In certain rapidly growing tumors this may be the case, but it is probably safe to estimate that the breast cancer has been present for several months or possibly for several years before the appearance of the tumor.

"Education of lay persons has sharpened public awareness to minimal, asymptomatic physical changes. Women are being made more aware of and have become conscious of minimal changes in the consistency and appearance of their breasts. Currently, a woman who finds a minute change in a breast will usually present herself for examination without delay, eliminating that prolonged interval so common during the past decade between the appearance of the abnormality of her breast and the consultation with a physician.

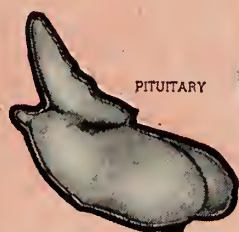
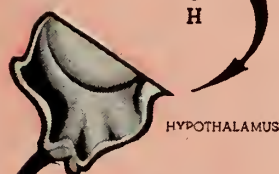
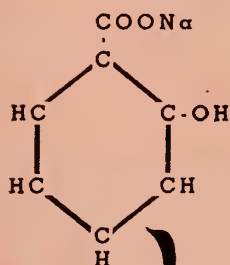
"The signs and symptoms of late breast cancer should be as seldom seen as those of leprosy in a general hospital."

Another article in the same issue of the *Journal* discussed various means which physicians may employ for early detection of breast cancer. This article was written by Dr. Otto Saphir, Chicago, associated with the department of pathology, Michael Reese Hospital.

Both articles stated that the most reliable means of diagnosing any lesion of the breast is by biopsy. Surgical biopsy can be easily done, and the correct-

(Continued on Page 50)

are



SALICYLATES

more than

ANALGESICS ?

There is significant evidence that salicylates, through action on the hypothalamus, stimulate the pituitary, producing an ACTH-like effect on the adrenal cortex.*

This new concept of salicylate action explains many of the clinical results obtained with salicylate therapy in the treatment of arthritides and rheumatic afflictions—observed results that cannot be attributed to analgesic action alone.

MASSIVE DOSAGE

To obtain maximum results, high salicylate blood levels are required. This means high oral dosage—in the order of 60 to 120 grains (4 to 8 Gm.) a day. This massive salicylate dosage can be attained, without excessive gastric disturbance, by using Salcedrox.

Salcedrox virtually eliminates gastric disturbance, because of the protective combination with activated aluminum hydroxide and calcium carbonate.

Salcedrox also contains a high dose of vitamin C, because it has been observed that rheumatic and arthritic states show vitamin C deficiencies, and salicylate therapy has a tendency to intensify depletion of vitamin C.

*Proceedings Soc. Exp. Bio. Med., 1952, v80, 51-55, G. Cronheim, et al.

Salcedrox

MASSIVE SALICYLATE DOSAGE WITHOUT
GASTRIC DISTURBANCE

FORMULA

Sodium Salicylate... 5 gr. (0.3 Gm.)
Aluminum Hydroxide Gel,
dried 2 gr. (0.12 Gm.)
Calcium Ascorbate... 1 gr. (60 mg.)
(equivalent to 50 mg. Ascorbic
Acid)
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Say 70 Per Cent of Breast Cancer Cases Can Be Cured

(Continued from Page 44)

ness of the diagnosis in routine cases is almost 100 per cent, according to Dr. Saphir.

Microscopic examination of secretion from the nipple may lead to early diagnosis of certain types of breast cancer, Dr. Saphir pointed out. Microscopic examination of secretions has proved very successful in the early diagnosis of vaginal and cervical cancers, and such studies should be included as a routine procedure during every complete breast examination, he added.

These two articles are the fourth and fifth in a

series of six such reports on cancer which will appear in the *Journal*. Written by cancer specialists, the series is sponsored by the office of the A.M.A.'s Committee on Research of the Council on Pharmacy and Chemistry. Previous articles discussed present-day methods for the earliest possible diagnosis of cancer of the cervix, stomach and lung, and the final one will discuss the care of the hopelessly ill cancer patient.

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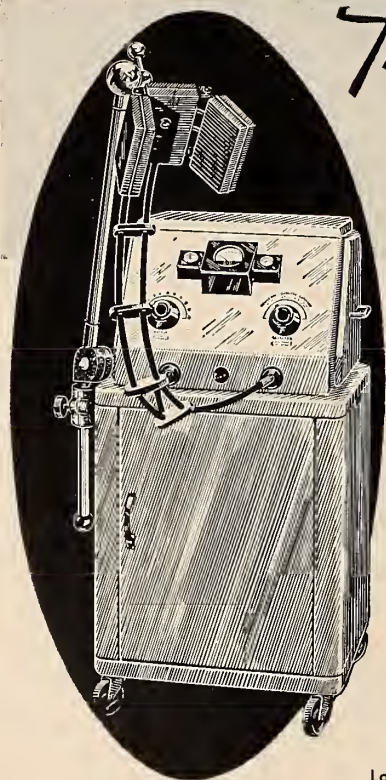
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Immunization is accepted almost universally and has proved successful as preventive medicine; the

periodic health examination is another such effective weapon for safeguarding health, he stated, adding:

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Physical check-ups, according to Dr. Burch, should be obtained by those between the ages of 15

(Continued on Page 59)



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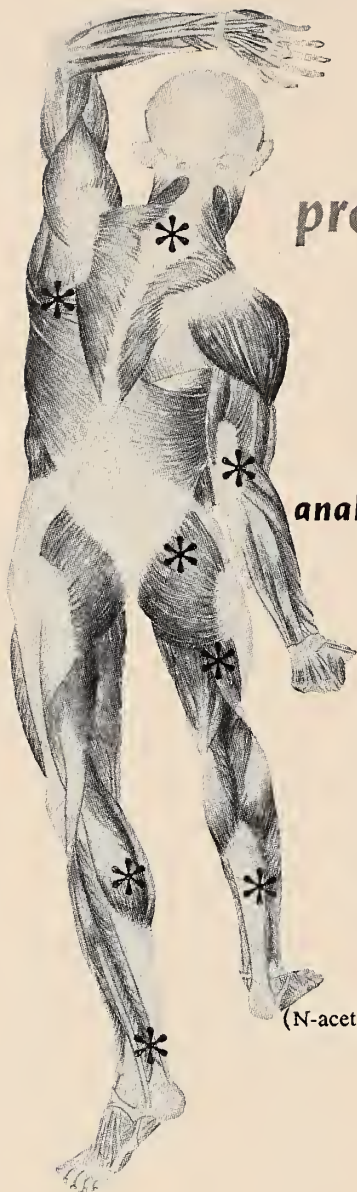
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Periodic Physical Examination Helps Keep Individual Healthy

(Continued from Page 51)

and 35 years every two years, by those 35 to 60 annually, and by those over 60 every six months. However, some individuals may require more frequent examinations, which can be determined by a physician.

Many diseases, such as cancer, tuberculosis and those of the heart, blood vessels and kidneys, would not cause so many deaths in early life if they were

diagnosed and treated in the initial stages, Dr. Burch pointed out. One doctor has estimated that each year thousands of Americans would have lived longer if they had known they needed help, or had sought it in time, he added.

The basic physical examination, Dr. Burch stated, should include the entire body: all body openings, the pelvic region, abdomen, breasts, chest, heart, skin, joints, muscles, nerve reactions and blood pressure. Basic laboratory tests that should be made include a urinalysis, blood count, stained smears, and serologic tests for syphilis.



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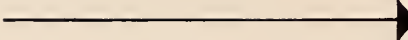
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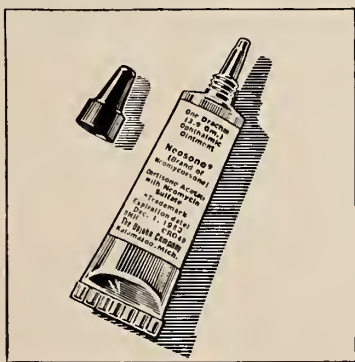
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ROSTER OF COUNTY MEDICAL SOCIETIES, CALIFORNIA MEDICAL ASSOCIATION

(County society secretaries are requested to notify California Medicine promptly when changes are indicated in their roster information.)

Alameda-Contra Costa Medical Assn., 354-21st Street, Oakland 12. Meets Third Monday, 8:15 p.m., Hunter Hall, Oakland.

Pres., Lester B. Lawrence, 2976 Summit St., Oakland 9.

Secy., Grant Ellis, 2298 Durant Ave., Berkeley.

Butte-Glenn Medical Society. Meets Second Thursday.

Pres., Donald J. Casey, 341 Broadway, Chico.

Secy., J. O. Chiapella, Paradise.

Fresno County Medical Society, 616 Security Bank Building, Fresno. Meets Second Tuesday, 6:30 p.m., Sunnyside Country Club.

Pres., William N. Knudsen, 701 Patterson Bldg., Fresno.

Secy., Joseph A. Logan, 812 Fern, Fresno.

Humboldt County Medical Society. Meets First Thursday.

Pres., E. Kenneth Smith, 1007 14th St., Eureka.

Secy., John W. Schonwald, 2828 E St., Eureka.

Imperial County Medical Society. Meets Second Tuesday, 8 p.m., Pioneer Memorial Hospital, Brawley.

Pres., George M. Cole, 528 G St., Brawley.

Secy., Ernest Brock, 200 South Imperial, Imperial.

Inyo-Mono County Medical Society. Meets Fourth Tuesday except December, January February.

Pres., J. Carl Cummings, 429 N. Edwards St., Independence.

Secy., Robert W. Denton, Bishop.

Kern County Medical Society, 1300 Chester Avenue, Bakersfield. Meets Third Tuesday, 7:30 p.m., Stockdale Country Club except June, July, August.

Pres., John E. Vaughan, 2109 18th Street, Bakersfield.

Secy., Lester S. Gale, 614 Bernard Street, Bakersfield.

Kings County Medical Society. Meets Second Monday, 8:00 p.m., Legion Hall, Hanford.

Pres., Paul R. Brother, 501 E. Madera, Avenal.

Secy., Willard S. Bridwell, 603½ North Irwin St., Hanford.

Lassen-Plumas-Modoc County Medical Society. Meets on call.

Pres., Robert A. Greenman, Chester.

Secy., Roy M. Peters, Portola.

Los Angeles County Medical Assn., 1925 Wilshire Blvd., Los Angeles 5. Meets First and Third Thursdays, 1925 Wilshire Blvd., Los Angeles.

Pres., Paul D. Foster, 1930 Wilshire Blvd., Los Angeles 5.

Secy., Ewing L. Turner, 1930 Wilshire Blvd., Los Angeles 5.

Madera County Medical Society.

Pres., Kenneth W. Butler, 133 E. Yosemite Ave., Madera.

Secy., Herbert Weinberger, 115 South A St., Madera.

Morin County Medical Society. Meets Meadow Club of Tamalpais, Fourth Thursday of every month, 7:00 p.m.

Pres., Edward Campion, 1018 E St., San Rafael.

Secy., Wm. Burgett Smith, 711 "D" St., San Rafael.

***Mendocino-Lake County Medical Society.**

Pres., James B. Massengill, 555 South Dora, Ukiah.

Secy., Duane W. Bradley, Box 346, Kelseyville.

Merced County Medical Society. Meets Fourth Thursday, Hotel Tioga, Merced.

Pres., Edwin M. Soderstrom, Merced Clinic, Merced.

Secy., John East, 652-20th St., Merced.

Monterey County Medical Society. Meets First Thursday.

Pres., H. M. Stufflebam, 11 Maple St., Salinas.

Secy., Horace F. Husser, 14 E. Romie Lane, Salinas.

Napa County Medical Society. Meets Second Wednesday.

Pres., Fred D. Heegler, 2030 Jefferson St., Napa.

Secy., Merle F. Godfrey, 1519 Jefferson St., Napa.

Orange County Medical Association, 308 Otis Building, Santa Ana. Meets First Tuesday, 7:00 p.m., Windsor Cafe, Santa Ana.

Pres., E. F. Cain, 200 N. Palm St., Anaheim.

Secy., Chad M. Harwood, 1202 North Broadway, Santa Ana.

Placer-Nevada-Sierra County Medical Society. Meets every second Wednesday of each month.

Pres., Carl R. Jackson, DeWitt State Hospital, Auburn.

Secy., Thomas J. Rossitto, 1166 High Street, Auburn.

Riverside County Medical Association. Meets Second Monday, 8:00 p.m., El Loro Room, Mission Inn.

Pres., Fred D. Lord, 4060 Orange St., Riverside.

Secy., John S. O'Toole, 3616 Main St., Riverside.

***Sacramento Society for Medical Improvement**, 2731 Capitol Avenue, Sacramento. Meets Third Tuesday, 8:30 p.m., Sutter Hospital Auditorium.

Pres., Dan O. Kilray, 3300 Third Avenue, Sacramento.

Secy., Frank G. Schiro, 2909 J Street, Sacramento.

San Benito County Medical Society. Meets First Thursday, Hazel Hawkins Memorial Hospital, Hollister.

Pres., David G. Young, Jr., 535 Monterey St., Hollister.

Secy., Gurdon L. Bradt, 1025 San Benito Street, Hollister.

***San Bernardino County Medical Society.** Meets First Tuesday, 8:00 p.m., San Bernardino County Charity Hospital.

Pres., Roger A. Vargas, 1181 North Mt. Vernon, San Bernardino.

Secy., Carl M. Hadley, 315 Platt Building, San Bernardino.

San Diego County Medical Society, 101 Medical-Dental Bldg., San Diego I. Meets Second Tuesday, Manor Hotel.

Pres., Ralph M. King, 8453 La Mesa Blvd., La Mesa.

Secy., W. H. Geistweit, Jr., 810 Medico-Dental Bldg., San Diego I.

San Francisco Medical Society, 2180 Washington Street, San Francisco 9. Meets Second Tuesday, 8:15 p.m., 2180 Washington Street, San Francisco 9.

Pres., Edmund J. Morrissey, 450 Sutter St., San Francisco 8.

Secy., Herbert C. Moffitt, Jr., 909 Hyde St., San Francisco 9.

San Joaquin County Medical Society. Meets First Thursday, 8:15 p.m., American Trust Building, Stockton.

Pres., J. E. Longley, 1138 Parker St., Tracy.

Secy., Frank A. McGuire, Medico-Dental Building, Stockton.

San Luis Obispo County Medical Society. Meets Third Saturday, 7:00 p.m., Golden Dragon Cafe, San Luis Obispo.

Pres., Jim Scow, 717-17th St., Paso Robles.

Secy., John H. Woodbridge, 891 Pismo Street, San Luis Obispo.

San Mateo County Medical Society, 235 Third Avenue, San Mateo. Meets Third Tuesday of each month.

Pres., Alf T. Haerem, 500 Arguello, Redwood City.

Secy., Jackson T. Flanders, 348 Broadway, Redwood City.

Santa Barbara County Medical Society, 300 West Pueblo St., Santa Barbara. Meets Second Monday, Cottage Hospital.

Pres., Walter C. Graham, 1421 State St., Santa Barbara.

Secy., Arthur E. Wentz, 103 E. Micheltorena, Santa Barbara.

Santa Clara County Medical Society, 1101 Medico-Dental Bldg., San Jose 14. Meets Third Monday of every month.

Pres., George W. Waters, 101 Race St., San Jose.

Secy., Dan Brodovsky, St. Claire Bldg., San Jose.

Santa Cruz County Medical Society. Meets every Second month, Second Tuesday. Time, place to be announced.

Pres., Philip E. Karleen, Soquel.

Secy., Samuel B. Randall, 230 Walnut Street, Santa Cruz.

Shasta County Medical Society. Meets Second Monday.

Pres., Louis Nash, 1440 Market St., Redding.

Secy., Henry R. Eagle, 1348 Market St., Redding.

***Siskiyou County Medical Society.** Meets Sunday on call.

Pres., J. W. Reynolds, 420 Florence Ave., Dunsmuir.

Secy., E. V. Anderson, Corwin Bldg., Dunsmuir.

Solano County Medical Society. Meets Second Tuesday, 8:00 p.m., Casa de Vallejo Hotel, Vallejo.

Pres., Milton B. Smith, 1234 Empire St., Fairfield.

Secy., Herbert L. Joseph, 607 Carolina, Vallejo.

Sonoma County Medical Society, 300 American Trust Bldg., Santa Rosa. Meets Second Thursday.

Pres., Carl E. Anderson, 1150 Montgomery Dr., Santa Rosa.

Secy., Frank E. Lones, 300 American Trust Bldg., Santa Rosa.

Stanislaus County Medical Society. Meets Third Thursday, 7 p.m., Hotel Hughson, Modesto.

Pres., Robert Barker, 1024 J St., Modesto.

Secy., J. Lyle Spelmann, 140 McHenry Ave., Modesto.

Tehama County Medical Society. Meets at call of President.

Pres., E. W. Wilson, 737 Washington, Red Bluff.

Secy., James L. Faulkner, 420 Pine St., Red Bluff.

Tulare County Medical Society.

Pres., Robt. D. Karstaedt, P.O. Box 1311, Porterville.

Secy., Vincent Dungan, 217 S. Willis, Visalia.

Ventura County Medical Society. Meets Second Tuesday, 7:15 p.m., Colonial House, Oxnard.

Pres., James M. Hunter, 1590 E. Main St., Ventura.

Secy., Franklin K. Helbling, 34 N. Ash Street, Ventura.

Yolo County Medical Society. Meets First Wednesday.

Pres., Robert A. Burns, Woodland Clinic Hospital, Woodland.

Secy., Richard J. Cundiff, Woodland Clinic, Woodland.

Yuba-Sutter-Colusa County Medical Society. Meets Second Tuesday.

Pres., Wm. J. Vasquez, 801-4th St., Marysville.

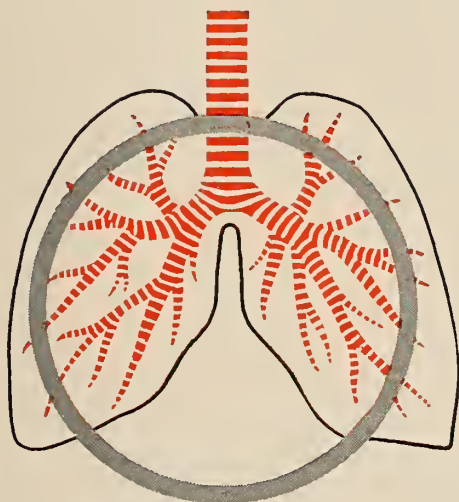
Secy., Robt. I. Hodgin, 729 D St., Marysville.

* 1952 officers.

(For roster of C.M.A. committees and other organizations, see last month's issue.)

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(1) Bordley, J. E., et al.: Bull. Johns Hopkins Hosp. 85: 396, 1949; (2) Rose, B., et al.: Canad. M. A. J. 62: 6, 1950; (3) Randolph, T. G., and Rollins, J. P.: In Proceedings of First Clinical ACTH Conference, edited by J. R. Mote. Philadelphia, The Blakiston Co., 1950, p. 479; (4) McCombs, R. P., et al.: Bull. New England M. Center 12: 187, 1950; (5) Baldwin, H. S., and DeGara, P. F.: J. Allergy 23: 15, 1952; (6) McCombs, R. P.: New England J. Med. 247: 1, 1952.

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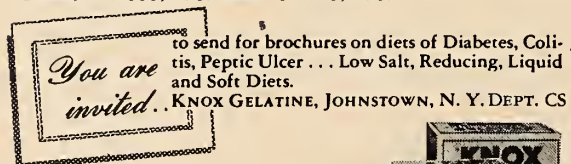
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1 Schoenheimer, R., Ratner, S., and Rittenberg, D., J. Biol. Chem., 127:333, 1939 and 130:703, 1939.



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Says Preventive Medicine Should Encompass Chronic Chest Disease

An important aspect of preventive medicine should be the control of chronic bronchopulmonary disease. It is common, communicable, preventable, and causes enormous economic losses, in the opinion of Dr. Walter Finke, Rochester, N. Y., associated with the chest clinic, Genesee Hospital.

In the United States, at least two to three million persons suffer from chronic bronchopulmonary disease, he wrote in a recent issue of the *Journal of the American Medical Association*. Such afflictions are chronic diseases of the lungs and windpipe, such as bronchitis, asthma and persistent forms of pneumonia.

"Since chronic bronchopulmonary disease often leads to serious complications, such as bronchiectasis, and accounts for enormous economic losses, it should be an important object of preventive medicine," Dr. Finke added.

"A dynamic, prophylactic approach should utilize present knowledge that the disease most frequently originates from inconspicuous respiratory ailments during childhood."

Dr. Finke pointed out that chronic bronchopulmonary disease rivals tuberculosis as a cause for lost manpower, and in terms of production time lost, it exceeds the common cold in importance.

Respiratory infection of recurrent character becomes evident in childhood, he stated, and many sickly children do not outgrow their susceptibility to these sicknesses. It is generally believed, he added, that children acquire most of their respiratory ailments from extrafamilial sources, especially in school.

According to Dr. Finke, children also get such diseases from intimate household contacts, the pattern presenting itself in preschool periods.

"At present, respiratory illnesses are considered by many to be a minor problem," he said. "Surely, thousands of children who a decade ago would have succumbed to pneumonia now survive and apparently are cured after a few days of antibiotic treatment; however, chronic disease often develops following inadequate treatment.

"Although over-all figures on mortality and duration of respiratory sickness may continue to decrease, recent surveys indicate an increase in the incidence of bronchopneumonia and other respiratory illnesses among children. Thus, respiratory infections still present major problems.

"We now have therapeutic agents that, if wisely used, can eradicate most of these childhood respiratory illnesses."

Although continuous administration of penicillin as a prophylaxis is still a controversial issue, Dr. Finke pointed to a study of 100 young children so

(Continued on Page 16)

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"Our own evidence would indicate that it is a more effective form of penicillin in patients with chronic pulmonary emphysema and bronchopulmonary infection."³

"This compound appeared to have a unique value in respiratory infections due to gram-positive bacteria."¹

Bibliography: 1. Barach, A.L., et al.: Bull. New York Acad. Med. 28:353 (June) 1952.
2. Flippin, H.F., et al.: Report distributed at the Chicago Session of the A.M.A. (June) 1952.
3. Segal, M.S., et al.: GP, in press.

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*T.M. Reg. U.S. Pat. Off. for penethamate hydriodide, S.K.F.
(penicillin G diethylaminoethyl ester hydriodide) Patent Applied For

BOOKS RECEIVED

APPRAISING PERSONALITY—The Use of Psychological Tests in the Practice of Medicine—Molly Harrower, Ph.D., Research Director, Court Intake Project, New York City Court of Domestic Relations; Consultant in Psychology, U. S. Army. W. W. Norton & Company, Inc., New York, 1952. 197 pages, \$4.00.

ATLAS OF MEDICAL MYCOLOGY—Emma Sadler Moss, B.S., B.M., M.D., Director, Department of Pathology, Charity Hospital of Louisiana at New Orleans; Clinical Professor of Pathology, Louisiana State University School of Medicine; and Albert Louis McQuown, B.S., B.M., M.D., Clinical Assistant Professor of Pathology, Louisiana State University School of Medicine. Williams and Wilkins Company, Baltimore, 1953. 245 pages, \$8.00.

BODY TEMPERATURE—Its Changes with Environment, Disease and Therapy. W. A. Selle, Ph.D., Professor of Biophysics and Physiology, University of California Medical School, Los Angeles. Charles C. Thomas, Publishers, Springfield, Ill., 1952. 112 pages, \$3.50.

CONQUEST OF FEAR, THE—Harley Williams, Charles C. Thomas, Publisher, Springfield, Illinois, 1952. 240 pages, \$4.00.

DISEASES OF THE SKIN—A Manual for Students and Practitioners. First compiled by the late Robert W. MacKenna, M.A., M.D., Ch.B.(Edin.)—Fifth Edition compiled by Robert M. B. MacKenna, M.A., M.D. (Camb.), F.R.C.P. (Lond.), Physician-in-Charge of the Dermatological Department and Lecturer in Dermatology, St. Bartholomew's Hospital and Medical College, London. Distributed by Williams and Wilkins Co., Baltimore, 1952. 611 pages, \$8.00.

EMERGENCIES IN MEDICAL PRACTICE—3rd Edition. Edited by C. Allan Birch, M.D., F.R.C.P., Physician Chase Farm Hospital, Enfield. E. & S. Livingston, Ltd., London, through Williams and Wilkins, Baltimore, 1952. 587 pages, 143 illustrations, 15 in color. \$7.00.

GYNECOLOGY—Diseases and Minor Surgery. Edited by Robert J. Lowrie, M.D. Charles C. Thomas, Publisher, Springfield, 1953. 806 pages, illustrated, \$22.50.

HANDBOOK OF DIET THERAPY—2nd Edition. Dorothea Turner. University of Chicago Press, Chicago, 1952. 138 pages, \$3.50.

HANDBOOK OF GYNAECOLOGICAL DIAGNOSIS—For Practitioners and Students—Walter Neuweiler, M.D., Professor of Midwifery and Gynaecology and Director of the Gynaecological and Obstetrical Clinic in the University of Berne. Translated from the German by Dr. Paul Ederer. Grune and Stratton, New York, 1952. 447 pages, \$12.00.

HEALTH INSTRUCTION YEARBOOK—1952. Compiled by Oliver E. Byrd, Ed.D., M.D., F.A.P.H.A., Professor of Health Education and Director, Department of Hygiene, School of Education, Stanford University. Stanford University Press, Stanford, Calif., 1952. 232 pages. \$3.50.

IT'S YOUR HOSPITAL AND YOUR LIFE. Lucy Freeman. Public Affairs Pamphlet No. 187. American Hospital Association, 18 East Division Street, Chicago 10, Ill., 1952. 32 pages, 25 cents. Quantity prices available.

LITERATURE ON STREPTOMYCIN—1944-1952—Revised Edition. Selman A. Waksman, Rutgers University Press, New Brunswick, N. J., 1952. 553 pages, \$5.00.

MENTAL DEFICIENCY—8th Edition. A. F. Tredgold, M.D. The Williams & Wilkins Co., Baltimore, 1953. 545 pages, illustrated, \$7.50.

OPERATING ROOM TECHNIQUE—Fourth Edition. St. Mary's Hospital, Rochester, Minn. W. B. Saunders Company, Philadelphia, 1952. 345 pages, \$6.50.

PAIN SYNDROMES—Diagnosis and Treatment—4th Edition. Bernard Judovich, M.D., Physician in Charge, Neuralgia Clinic, and William Bates, M.D., Professor of Surgery, University of Pennsylvania. F. A. Davis Co., Philadelphia, Pa., 440 pages, 184 illustrations, \$7.50.

PHARMACOLOGY OF ANESTHETIC DRUGS, THE—3rd Edition. John Adriani, M.D., Director, Department of Anesthesia, Charity Hospital of Louisiana. Charles C. Thomas, Publisher, Springfield, 1953. 179 pages. Illustrated, \$9.50.

PRINCIPLES AND PRACTICE OF MEDICINE—A Textbook for Students and Doctors. L. S. P. Davidson, B.A. (Cantab.), M.D., F.R.C.P. (Edin.), F.R.C.P. (Lond.), M.D. (Oslo), Physician to H.M. the Queen in Scotland, Professor of Medicine and Clinical Medicine, University of Edinburgh. The Williams and Wilkins Company, Baltimore, 1952. 919 pages. \$6.75.

RIDDLE OF CANCER, THE—2nd Edition. Charles Oberling, M.D., Director of the Institute of Cancer Research, University of Paris. Yale University Press, 143 Elm Street, New Haven, Conn., 1952. 238 pages, \$5.00.

SPECIAL DIET COOK BOOK, THE. Marvin Small. With Introduction by James R. Wilson, M.D., Secretary, the Council on Foods and Nutrition, A.M.A. The Greystone Press, 100 Sixth Avenue, New York 13, 1952. 511 pages, \$2.95.

SURGERY OF THE OESOPHAGUS. R. H. Franklin, M.D., Senior Surgeon, Post Graduate Medical School of London. Williams & Wilkins Co., Baltimore, 1953. 219 pages, \$8.50.

TEXTBOOK OF PHYSIOLOGY—11th Edition. William D. Zoethout, Ph.D., Professor Emeritus of Physiology in the Chicago College of Dental Surgery (Loyola University), and W. W. Tuttle, Ph.D., Professor of Physiology, College of Medicine, State University of Iowa. The C. V. Mosby Company, St. Louis, 1952. 692 pages, 302 text illustrations and five color plates, \$4.75.

TEXTBOOK OF SURGERY. Edited by H. F. Moseley, M.A., D.M., M.Ch. (Oxon.), F.A.C.S., F.R.C.S. (Eng.), F.R.C.S. (C), Assistant Professor of Surgery, McGill University. The C. V. Mosby Company, St. Louis, 1952. 896 pages, 460 text illustrations and 46 color plates, \$15.00.

UNIPOLAR LEAD ELECTROCARDIOGRAPHY AND VECTORCARDIOGRAPHY—Including the Standard Leads, the aV and V Leads, the Cardiac Arrhythmias and the Principles of Vectorcardiography—3rd Edition. Emanuel Goldberger, M.D., F.A.C.P., Associate Attending Physician, Montefiore Hospital, New York, Lecturer in Medicine, Columbia University. Lea & Febiger, Philadelphia, 1953. 601 pages, 312 illustrations, \$10.00.

VITAMIN DIGEST, A. Guy W. Clark, Technical Director, Lederle Laboratories Division, American Cyanamid Company. Charles C. Thomas, Publisher, Springfield, 1953. 254 pages, \$6.50.

1952 YEAR BOOK OF DRUG THERAPY. Harry Beckman, M.D., Director, Departments of Pharmacology, Marquette University Schools of Medicine and Dentistry. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago, 1952. 606 pages, \$5.50.

1952 YEAR BOOK OF RADIOLOGY. Fred J. Hodges, M.D., and John F. Holt, M.D., The Year Book Publishers, Inc., 200 East Illinois Street, Chicago, 1952. 416 pages, illustrated, \$7.50.

FORTHCOMING

AMEBIASIS: PATHOLOGY, DIAGNOSIS AND CHEMOTHERAPY. By H. Anderson. Thomas, Due March.

ATLAS OF SURGICAL EXPOSURES OF EXTREMITIES. By Banks and Laufman. Saunders. Due March.

VAGINAL INFECTIONS. By Bernstine and Rakoff. Blakiston. Due February.

NASH'S SURGICAL PHYSIOLOGY—2nd Edition. By B. Blades. Thomas. Due April.

FUNDAMENTALS OF CLINICAL ORTHOPEDICS. By Casagrande and Frost. Grune & Stratton. Due March.

FAMILIAL NONREAGINIC FOOD ALLERGY—3rd Edition. By A. Coca. Thomas. 1953.

CURRENT THERAPY 1953. By Conn. Saunders. Due February.

ROENTGEN, RADIUM AND RADIOISOTOPE THERAPY. By Delario. Lea & Febiger. Due February.

EXAMINATION OF THE SURGICAL PATIENT. By Dunphy and Botsford. Saunders. Due March.

RADIOLOGIC EXAMINATION OF THE SKULL AND INTRACRANIAL CONTENTS. By Epstein and Davidoff. Lea & Febiger. Due February.

PATHOLOGY OF THE HEART. Edited by S. Gould. Thomas. Due March.

OPHTHALMOLOGIC DIAGNOSIS: Including a Primer of Ophthalmology. By F. Haessler. Williams & Wilkins. 1953.

PERIPHERAL NERVE INJURIES—2nd Edition. By Haymaker and Woodhall. Saunders. 1953.

GYNECOLOGICAL AND OBSTETRICAL PATHOLOGY. By Herbut. Lea & Febiger. Due February.

OPHTHALMIC SURGERY. By Meller. Blakiston. Due February.

ATLAS OF GYNECOLOGY. By Parsons and Ulfelder. Saunders. Due April.

CONDUCTION ANESTHESIA—2nd Edition. By Pitkin. Lippincott. 1953.

CLINICAL THERAPEUTIC RADIOLOGY—2nd Edition. By U. Portmann. Williams & Wilkins. Due November 1953.

PEDIATRIC GYNECOLOGY—3rd Edition. By Schauffler. Year Book. Due March.

DERMATOLOGY IN GENERAL PRACTICE. By J. Swartz. Williams & Wilkins. 1953.

OPERATIVE GYNECOLOGY—2nd Edition. By TeLinde. Lippincott. Due February.

DIAGNOSTIC TESTS IN NEUROLOGY. By R. Wartenberg. Year Book. Due March.



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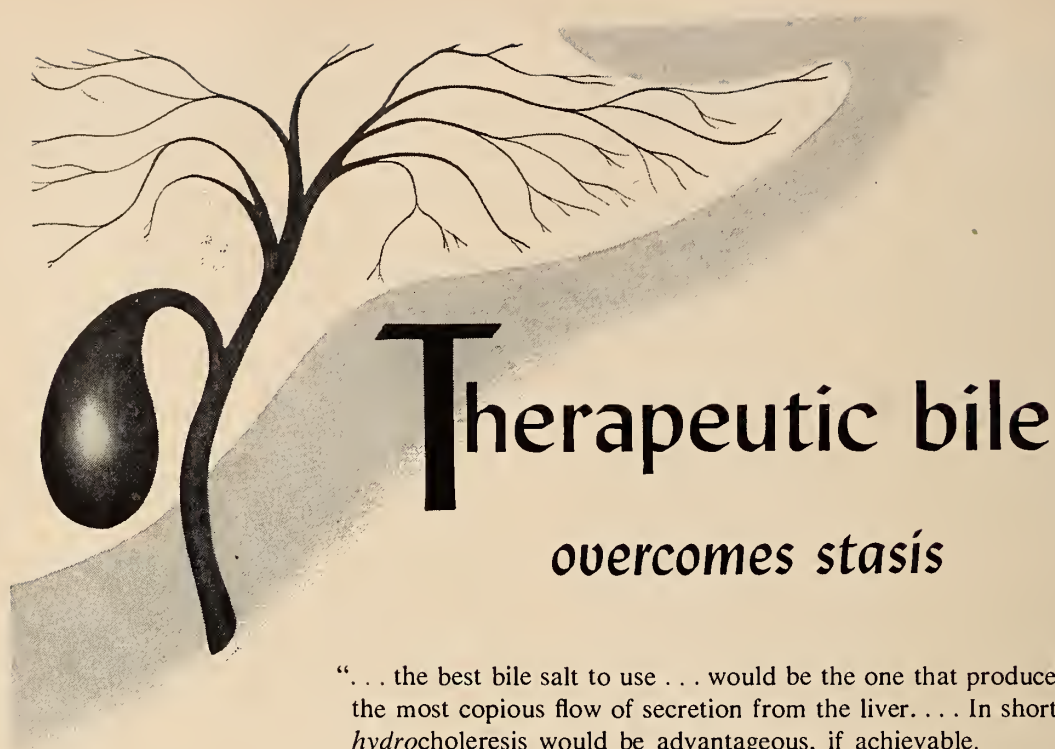
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*Beckman, H.: *Pharmacology in Clinical Practice*, Philadelphia, W. B. Saunders Company, 1952, p. 361.

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Says Preventive Medicine Should Encompass Chronic Chest Disease

(Continued from Page 10)

treated. It showed that the incidence of disabling and non-disabling respiratory illnesses was 2.5 per child in the 41 treated children, compared with 4.3 in 35 children who were not treated with penicillin and acted as controls. The number of days of respiratory illnesses was 9.3 per child in the treated group, as against 23.8 in the control group.

In a group of older children studied, Dr. Finke reported absenteeism from school averaged 25 days per 1,000 pupil days. In addition to this over-all average, a treated group of children lost only 20

additional days, against 63 days lost by a control group. Only 30 per cent of the 62 children continuously treated with penicillin were absent from school more than three times, compared to 76 per cent of the controls.

"It appears that with the cooperation of the private physician, preschool and school health programs could greatly contribute to the prevention of bronchopulmonary disease," Dr. Finke wrote.

This can be accomplished, he added, by observation of infants born into families in which chronic respiratory disease exists, prompt elimination of significant respiratory infections, and the discovery of chronic cases by the family physician or by routine chest x-rays.

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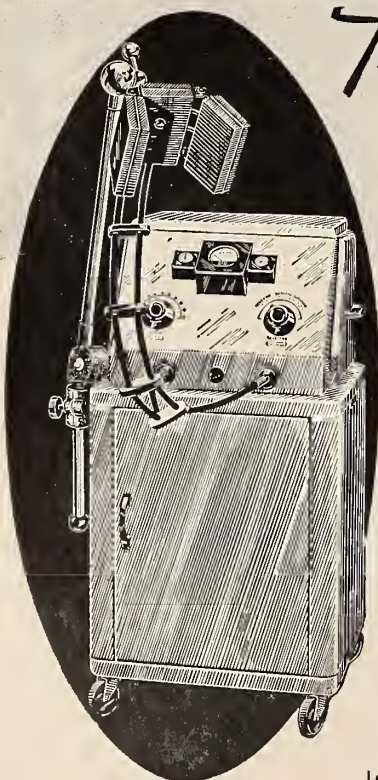
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Describes New Type of Surgical Needle

A new type of surgical needle, for use in suturing incisions of the mitral valve of the heart, was described in a recent issue of the *Journal of the American Medical Association* by Dr. Gerald H. Pratt, New York.

A ski-shaped type of needle, the new addition to the physician's armamentarium was made with the base of the ski as a long square, instead of a flat surface, as is the case in most surgical needles. This change, Dr. Pratt stated, permits the needle to

be held securely at any angle and makes suturing of the heart valve less hazardous.

"The use of such a needle for other deep suturing is also feasible," he added. "Other parts of the heart, the deep lying vessels in the chest or abdomen, the bronchi, the pelvic bowel and the bladder at times all present suture problems in which such a needle proves valuable."

Dr. Pratt is associated with the vascular clinic of St. Vincent's Hospital and the New York University College of Medicine.

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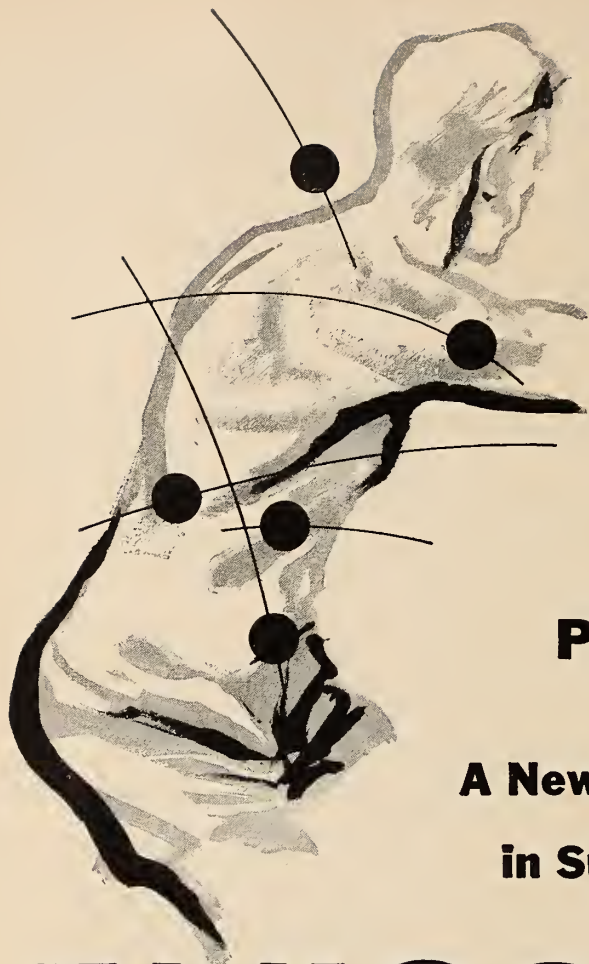
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New Drug May Aid Arthritic; Warn of Toxic Side-Effects

Phenylbutazone (Butazolidin®), a new drug, offers promise in the treatment of rheumatoid arthritis and other similar musculoskeletal disorders, two articles in a recent issue of the *Journal of the American Medical Association* stated.

However, both stressed the fact that the drug can cause serious side-effects, and its use should be limited until further studies of its effects and toxicity have been made. They also stated that it has not been determined as yet whether the drug is truly anti-rheumatic or only analgesic in its action.

One article, prepared by five Tucson, Ariz., physicians, reported on the results of treating 147 persons suffering from rheumatoid arthritis and rheumatoid spondylitis.

"Phenylbutazone appears to produce striking subjective improvement in a high percentage of rheumatoid spondylitis, and is less effective in peripheral rheumatoid arthritis," they stated. "Objective improvement is less dramatic, but is definite in a small percentage of cases."

Subjective improvement included a marked decrease in pain and stiffness, and an increase in a sense of well-being. Objective improvement included a marked decrease in swelling, an increase in range of motion, and an increase in strength.

Forty-four per cent of the patients suffered toxic side-effects from the drug, some of a rather serious nature, the doctors reported. Because of toxic reactions, it was necessary to discontinue treatment in 11 patients. The untoward effects included blood disorders, salt and water retention precipitating heart failure, the development of ulcer symptoms, rash, swelling, weight gain, nausea and vomiting. Most of the toxic effects subsided upon cessation of use of the drug.

The second article, prepared by five New York physicians, described a study of 200 trials of phenylbutazone and of a combination of phenylbutazone and aminopyrine. The doctors expressed a preference for phenylbutazone alone, as the possible pharmacological hazard of aminopyrine is eliminated.

"Our preliminary observations indicate that these drugs are superior analgesics in the painful, chronic musculoskeletal conditions studied," they pointed out. "So far, our results show that they appreciably surpass the suppression of symptoms provided by salicylates, gentisate and aminopyrine."

Fifty-one toxic reactions were seen by the New York doctors, who stated that, although none were serious, it became necessary or was deemed advisable to interrupt therapy in 22 of the patients. Most reactions subsided when use of the drug was discontinued.

Both articles reported that the effectiveness of the drug became apparent within a few days. When ap-

(Continued on Page 26)

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*Hermann, I. F., and Smith, R. T.: J.L. Lancet 71:271 (July), 1951.



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New Drug May Aid Arthritic; Warn of Toxic Side-Effects

(Continued from Page 22)

preciable benefits were obtained, they rapidly reached a maximum, and improvement remained level throughout the period of treatment. Most patients, it was added, noted a return of symptoms within three days after cessation of therapy.

The Tucson physicians who made one report are Drs. Charles A. L. Stephens, Jr., Elmer E. Yeoman, Paul Holbrook, Donald F. Hill, and William L. Goodin. The New York doctors are Drs. Otto Steinbrocker, Sidney Berkowitz, Mortimer Ehrlich, Mortimer Elkind and Solomon Carp.

First Injunction Under Durham-Humphrey Drug Law. Food and Drug Administration reports the first injunction obtained under the Durham-Humphrey drug law which went into effect last spring. Defendant was the Renesol Corp., of Jersey City, a mail-order drug house, which was permanently enjoined from mailing a phenobarbital, Renesol, without a prescription. The company also will be required to give adequate directions for use. Renesol was promoted for treatment of epilepsy. FDA said its inspectors, who placed orders without mentioning intended use, were supplied with whatever quantity they requested. Directions were said to contain neither recommended dosage nor warning that the drug was habit-forming.

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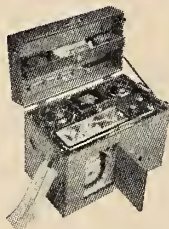
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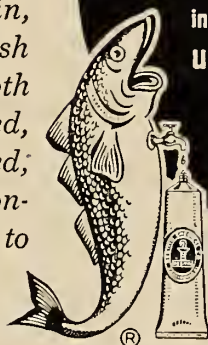
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2. Turell, R.: New York St. J. M. 50:2282, 1950.
3. Heimer, C. B., Grayzel, H. G., and Kramer, B.: Archives Pediat. 68:382, 1951.



Pentagon Conference Starts Discussions on Doctor Draft Law Extension

Defense Department officials, with the assistance of representatives from other federal departments and professional associations, have started work on problems of the physician-dentist-veterinarian draft, preparatory to asking for an extension and amendment of Public Law 779, scheduled to expire next June 30.

Defense Department's Armed Forces Medical Policy Council sponsored the first discussion meeting, attended by spokesmen for dentists, veterinarians, hospitals, and medical schools, as well as the Amer-

ican Medical Association. Represented also were the Armed Forces, Defense Department's manpower division, Selective Service and the Rusk Committee.

At the first meeting, held in the Pentagon, a Defense Department spokesman gave this outline of the problem:

1. Medical Priorities I and II will be exhausted shortly, and future requirements will have to be met from Priorities III and IV. Questionnaires are now being sent to a number of physicians in Priority III.

There aren't enough young men in Priority III to

(Continued on Page 33)



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Pentagon Conference Starts Discussions on Doctor Draft Law Extension

(Continued from Page 32)

meet military requirements for long; unless the younger men in Priority IV are made available by a change in the law, the services will be offered too many of the colonel and major age and experience, not enough for the captain and lieutenant commissions. Dislocating physicians of 15 to 20 years' experience from their civilian practice will create additional problems.

3. The age and experience level of Priority IV men make many of them more acceptable, but it is

possible that a high percentage already have had two or more years of active military duty; besides, these men can't be called until Priority II has been used up.

4. The professional manpower shortage will continue until 1958, when enough non-veterans, currently deferred from the regular draft to complete their medical training, will be available to meet most military requirements.

No conclusions were reached at the first meeting, and association representatives were not asked to pledge support for an extension of PL 779 at this time.

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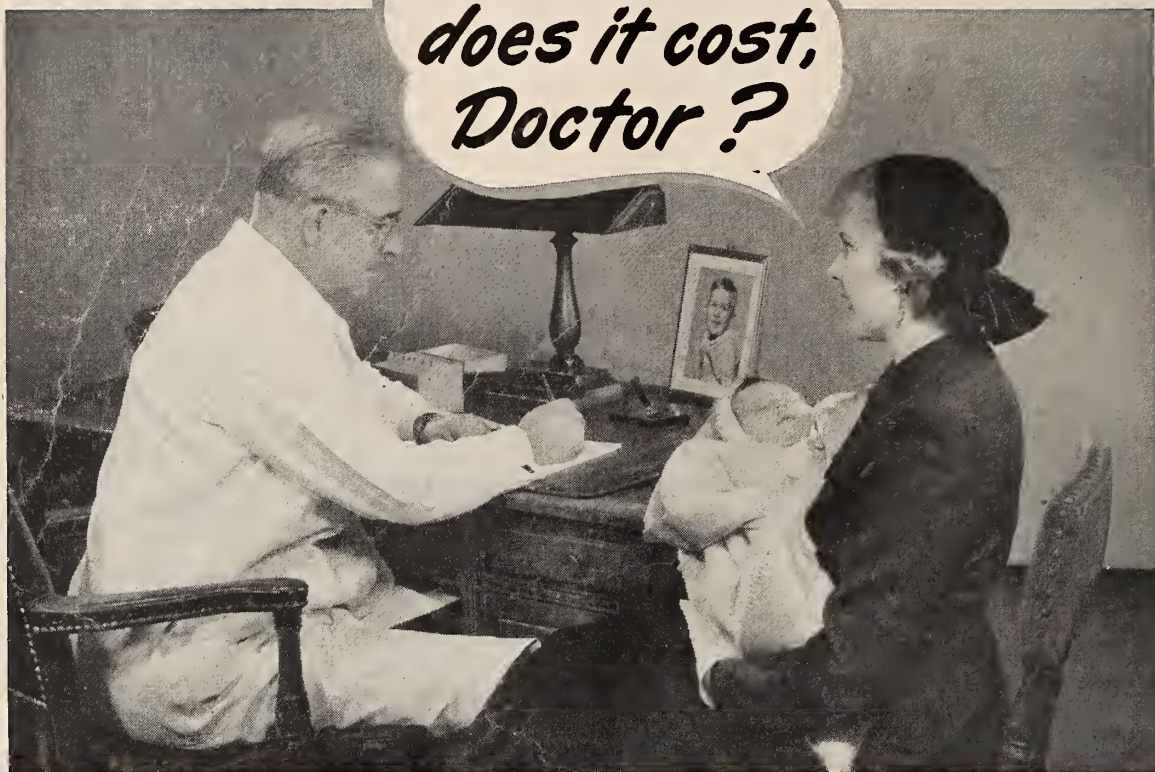
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If you have a sore in your mouth that has persisted for three or four weeks, see your physician. It may be cancer.

Cancer within the mouth accounts for approximately eight per cent of all human malignant diseases, according to Dr. James W. Hendrick, San Antonio, and Dr. Grant E. Ward, Baltimore. The greatest incidence of such cancers is between the ages of 50 and 60 years, with men being affected five times as often as women.

Because of their accessibility, such cancers should be diagnosed early and adequate treatment instituted, the doctors wrote in a recent issue of the *Journal of the American Medical Association*. However, the larger percentage, when seen by the tumor specialist, are advanced cases.

Because cancers within the mouth frequently spread to other parts of the body, it is essential not only to eradicate the primary lesion but also to

eradicate the involved lymph nodes, which transmit the cancer to other parts of the body, the doctors pointed out.

Microscopic examination of a specimen of the intraoral lesion should be made when persistent sores prevail, they stated. The choice of treatment depends upon the location of the tumor, its size, its extent, the type, the age and general physical condition of the patient, and the lymph node involvement.

These cancers may be treated with irradiation, electrosurgery, surgery, or a combination of these methods, in the opinion of the doctors, who added:

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Scarcity of Men? Here's the Reason

When some women say there seems to be a scarcity of men, they know what they are talking about.

For the first time in American history, the 1950 census revealed, there are more women than men in our nation's population—1,430,000 more women, to be exact.

"According to present indications, the preponderance of women will continue to grow, with attendant increase in widowhood and dependency," it was stated editorially in a recent issue of the *Journal of the American Medical Association*.

The greatest difference occurs in the age groups over 45 years, where women outnumber men 1,000 to 956, it added.

Various factors contribute to the growing predominance of women over men. While the ratio of

the two sexes at birth has been stable from year to year, about 1,055 men to 1,000 women, the ratio of deaths in men has been increasing. In 1930, this ratio was 1,210 deaths in men per 1,000 in women; in 1951, it was 1,333 men to 1,000 women.

The changing pattern of migration into and out of the United States also has been influential in the increase of the female population of the nation. In recent years, immigrants to this country have been predominantly women, and more men than women have been leaving the country. A net gain of 181,500 women over men occurred by migration during the five years immediately following World War II.

War deaths also have provided an additional factor for widening the margin between our male and female population.



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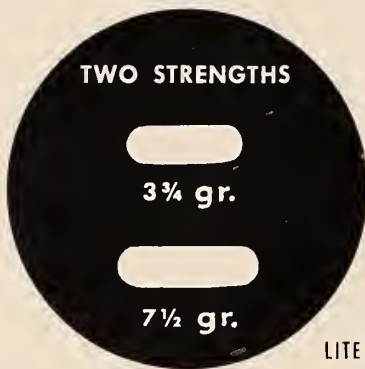
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Studies in Cerebral Metabolism

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RICHARD C. BENTINCK, M.D., EUGENE EISENBERG, M.D.,
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PHYSICIANS who administer steroid hormones can hardly fail to note the cerebral manifestations produced. The administration of testosterone has long been associated with a feeling of general well-being. Recently, new interest has been aroused in hormonal-cerebral relations by the dramatic central nervous system effects of cortisone and corticotropin (ACTH) — namely, euphoria, mania, depression, psychoses, and even convulsions.^{4, 15, 16, 20, 21, 23, 24, 26}

Alterations of the electroencephalographic pattern have been observed during physiologic changes in hormonal status, such as those that occur in the menstrual cycle⁵ and pregnancy,¹¹ and also in endocrine deficiencies and excesses, such as Addison's disease^{9, 10} on the one hand and induced and spontaneous hyperadrenocorticism² on the other. Worthy of note in this regard are the mental and emotional changes in myxedema, thyrotoxicosis, Simmonds' disease, hypoparathyroidism and hypoglycemia.

Hormonal replacement therapy given to patients with Addison's disease restores the electroencephalo-

• In numerous clinical observations, it has been noted that steroid hormones have effects upon the central nervous system. Earlier interpretations of this relationship were largely speculative until newer methods permitted quantitation of actions of hormones and hormonal deficiencies on cerebral metabolism. The present studies indicate that certain steroids which affect behavior also influence cerebral metabolism.

graphic pattern to normal.^{9, 27} Three groups of investigators^{1, 20, 22} reported reduced frequency of idiopathic convulsive seizures following administration of desoxycorticosterone acetate. Selye induced anesthesia in rats by injection of various steroids,²⁵ and recently anesthesia in man following intramuscular injection of 11-hydroxyandrosterone was reported.²⁷

These observations led to a study of the effect of steroids on cerebral metabolism. In initial experiments it was observed that certain steroids were able to inhibit oxygen consumption by rat brain in vitro to the same degree that they produced anesthesia in the intact animal.¹³ And in further studies it was noted that this inhibitory action is exerted through the dehydrogenases.^{13, 14, 17}

To determine whether the in vitro inhibition might have any physiological significance, cerebral respiration was studied in rats whose steroidal status was altered by castration.⁶ It was found that castra-

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Drs. Bentinck and Hobson are Schering Fellows in Clinical Endocrinology.

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tion of immature male rats resulted in increased cerebral oxygen consumption, at least as measured in vitro. This was not true of rats castrated in adult life. Administration of testosterone in vivo or in vitro reduced the oxygen uptake to an almost normal rate. Thus, it appears that testosterone exerts a "braking effect" on cerebral metabolism. As with other actions of the steroids, apparently this effect is not peculiar to testosterone but is a property common to many steroids of a certain chemical type.⁷ A water-soluble steroid conjugate, the glucoside of desoxycorticosterone (DCG)* was found to possess this depressant effect on oxygen uptake in vitro.⁸ Aird and Gordan¹ demonstrated that administration of 50 mg. of this compound intravenously produced immediate but evanescent reduction of electroencephalographic abnormalities in patients with convulsive seizures.

These studies initiated attempts to investigate possible interrelationships between steroids and cerebral metabolism in man. The investigation was made possible by a technique for determination of cerebral blood flow recently developed by Kety and Schmidt;^{18, 19} for if the volume of the flow of blood through an organ can be determined and the afferent and efferent blood analyzed for any given constituent, it is possible to calculate the rate of utilization or production of that constituent by the organ.

DCG was found to affect certain phases of cerebral metabolism. It liberates sugar from the brain of about one-third of subjects, as demonstrated by a rise in sugar content of cerebral venous blood above the arterial level; no such rise was found in ante-cubital venous blood.³ Attempts were made to identify the liberated sugar and it was found that only part of it is fermentable—that is, glucose; the bulk is non-fermentable, apparently galactose.¹² When sections of gray and white matter of the brain were analyzed for cerebroside galactose content immediately before and after the intravenous administration of 50 mg. of DCG to psychotic patients during prefrontal lobotomy, decrease of the galactoside content of the white matter occurred in one third of the cases. Thus, it appears that the cerebral cerebroside, like hepatic glycogen, are labile and subject to hormonal influences. Unfortunately, it was not possible to make simultaneous determinations of cerebral blood flow and biopsy studies in the same patients. Such a combined study would make it possible to balance the breakdown of glycogen and cerebroside against the liberation of glucose and galactose.

Further evidence of hormonal control of cerebral metabolism was obtained by studying groups of patients with various endocrinopathic conditions.¹²

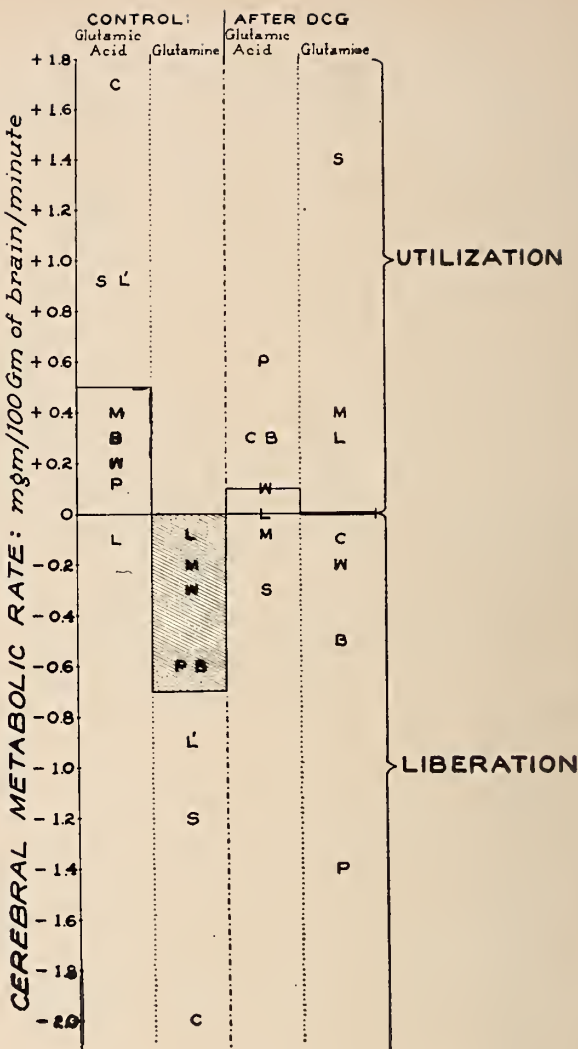


Chart I.—Each initial represents one human subject. Its position on the graph shows the rate at which glutamic acid and glutamine are metabolized by the brain. A positive value means that the arterial level exceeds the cerebral venous level; therefore, the substance is removed from the blood as it courses through the brain. A negative value indicates that the cerebral venous blood contains more of the substance than is found in the arterial blood; therefore, the substance is liberated from the brain. The bars indicate average values for the group. Note that prior to the administration of DCG, there is reciprocal relationship, statistically and individually, between the uptake of glutamic acid and the release of glutamine from the brain—that is, glutamic acid disappears because it combines with ammonia to become glutamine (amidation). After DCG, average values (bars) indicate that glutamic acid is no longer amidated, and in some cases (patients M and S) amidation is even reversed.

Cerebral oxygen and glucose uptake of castrated adult males and of patients with hypopituitarism and preadolescent eunuchoidism was measured. These measurements were not made in patients with Addison's disease because of the hazards of omitting therapy in this illness. Although only the

group with eunuchoidism was sufficiently large to permit statistically valid conclusion, the other groups are worthy of discussion since in them there were trends which seem to correlate fairly well with the results of experiments on animals.

In all the hormonal deficiency conditions studied, an increase in glucose uptake was evident. A concomitant increase in oxygen consumption, however, occurred only in the subjects with preadolescent eunuchoidism; in the other conditions, glucose is apparently not burned completely. In both hypopituitary subjects and castrates, the rates of oxygen consumption were lower than normal. DCG caused the cerebral oxygen consumption of castrates to return to normal. By good fortune opportunity was given to study a patient before and after hypophysectomy.[†] Before operation the cerebral metabolic consumption of oxygen and glucose in this patient was normal, as was the response to DCG. Following operation, while the patient was in an apituitary state, changes like those observed in hypopituitary patients, but to a greater degree, were present.

In the present studies it has been consistently found that normal brain tissue utilizes more oxygen than can be accounted for by the amount of glucose metabolized. It therefore appears that other foodstuffs, in addition to glucose, must be utilized by the brain. For that reason, measurement of the cerebral metabolism of other possible metabolites has been begun. Metabolism of the substances studied thus far (glucose, galactose, pyruvate, lactate, alanine, glycine, glutamic acid and glutamine) does not account for all the oxygen utilized.

Of particular interest is the glutamic acid-glutamine metabolism. Glutamic acid is taken up by the brain; however, glutamine is liberated in equivalent amounts. Therefore, glutamic acid does not account for oxygen consumption by the brain; it seems to figure only as a carrier for ammonia excretion. Statistical studies indicate that DCG inhibits this mechanism, possibly by inhibiting the oxidative reactions which supply energy for amidation (Chart 1).

CONCLUSIONS

1. Steroids are capable of altering patterns of cerebral metabolism in vitro and in vivo.
2. Desoxycorticosterone glucoside effects release of sugars from the brain in about one-third of human subjects.
3. Human brain in situ uses foodstuffs other than glucose.
4. Human brain in situ amidates glutamic acid to glutamine.

[†]Through the courtesy of Dr. M. B. Shimkin and Dr. E. B. Boldrey.

5. Studies of cerebral metabolism in hormone deficiencies suggest that hormone may normally influence the pattern of utilization of foodstuffs by the brain.

6. These data demonstrate that certain steroids which affect cerebral behavior also affect cerebral metabolism. It does not necessarily follow that the alterations of human behavior and mental state produced by hormones reflect changes in cerebral metabolism.

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Cat's Got His Tongue

INASMUCH as the California State Legislature now has before it a proposal to protect insectivorous song birds by legislative restraint upon the predatory activity of cats, it seems appropriate here to print a sober and judicious appraisal, made by a servant of the people of Illinois, of a similar bill that was passed some three years ago by the General Assembly of that state.

I herewith return, without my approval, Senate Bill No. 93, entitled, "An Act to Provide Protection to Insectivorous Birds by Restraining Cats." This is the so-called "Cat Bill." I veto and withhold my approval from this bill for the following reasons:

It would impose fines on owners or keepers who permitted their cats to run at large off their premises. It would permit any person to capture, or call upon the police to pick up and imprison, cats at large. It would permit the use of traps. The bill would have statewide application—on farms, in villages, and in metropolitan centers.

This legislation has been introduced in the past several sessions of the legislature, and it has, over the years, been the source of much comment—not all of which has been in a serious vein. It may be that the General Assembly has now seen fit to refer it to one who can view it with a fresh outlook. Whatever the reasons for passage at this session, I cannot believe there is a widespread public demand for this law or that it could, as a practical matter, be enforced.

Furthermore, I cannot agree that it should be the declared public policy of Illinois that a cat visiting a neighbor's yard or crossing the highway is a public nuisance. It is in the nature of cats to do a certain amount of unescorted roaming. Many live with their owners in apartments or other restricted premises, and I doubt if we want to make their every brief foray an opportunity for a small game hunt by zealous citizens—with traps or otherwise. I am afraid this bill could only create discord, recrimination and enmity. Also consider the owners' dilemma: To escort a cat abroad on a leash is against the nature of the cat, and to permit it to venture forth for exercise unattended into a night of new dangers is against the nature of the owner. Moreover, cats perform useful service, particularly in rural areas, in combating rodents—work they necessarily perform alone and without regard for property lines.

We are all interested in protecting certain varieties of birds. That cats destroy some birds, I well know, but I believe this legislation would further but little the worthy cause to, which its proponents give such unselfish effort. The problem of cat versus bird is as old as time. If we attempt to resolve it by legislation, who knows but that we may be called upon to take sides as well in the age-old problems of dog versus cat, bird versus bird, even bird versus worm. In my opinion, the State of Illinois and its local governing bodies already have enough to do without trying to control feline delinquency.

For these reasons, and not because I love birds the less or cats the more, I veto and withhold my approval from Senate Bill No. 93.

The message of veto was signed by a man who later became a rather extraordinarily articulate aspirant to the presidency of the United States.

Newer Therapy for Leukemia, Polycythemia, and Lymphoma

ARTHUR A. MARLOW, M.D., and GRANT R. BARTLETT, Ph.D., La Jolla

X-RADIATION was the only specific treatment for leukemia and lymphoma until recently. It is the treatment of choice in many instances. However, alternate therapy for these and other allied conditions is now available.

Chronic leukemia

A great deal can be accomplished in the treatment of chronic leukemia if it is borne in mind that present treatment is palliative. The whole patient, rather than the diagnosis or the leukocyte content of the blood, should be treated. Osgood⁵ recommended the treatment of chronic leukemia from the date of discovery, regardless of symptoms. He maintained that patients can be kept in happier and more productive states during their remaining years by this method. He emphasized follow-up at intervals regularly spaced to determine the effects of radiation before further treatment is applied. Block and Jacobson¹ expressed the opinion that specific therapy should be reserved for patients with symptoms of active disease—an opinion concurred in by the majority of investigators. Ross and Ebaugh⁸ noted that available specific agents destroy normal as well as neoplastic cells and suggested that they be used with care.

The advisability of a conservative attitude toward specific therapy is illustrated by the cases of two patients under the authors' observation. One, an unmarried white woman, a teacher, was referred to the authors 11 years ago in 1941, at the age of 56. Chronic lymphatic leukemia had been discovered five years before, in 1936. As the patient remained in good health, specific treatment had not yet been started at the present writing. The other, who is being treated, is a white man 74 years of age with a well documented diagnosis of chronic lymphatic leukemia made 29 years ago in 1923.

X-radiation is the preferred treatment at present. Radioactive phosphorus is used with increasing frequency because of the absence of radiation sickness and the ease of administration. It may become the treatment of choice as experience with it increases.

• X-radiation remains the treatment of choice in most cases of leukemia and lymphoma, but new agents are playing an increasing role in therapy. Radioactive phosphorus does not produce radiation sickness and results with it are comparable to those of x-ray therapy in chronic leukemia. Urethane and nitrogen mustard may produce remissions in patients with chronic leukemia who have become resistant to radiation. Triethylene melamine may be administered orally with nitrogen mustard-like effects and is undergoing further trial. Aminopterin, ACTH and cortisone often cause short remissions in acute leukemia. Urethane is the best treatment available for multiple myeloma. Polycythemia vera is well controlled by radioactive phosphorus combined with venesection. Nitrogen mustard is often effective and triethylene melamine shows promise in Hodgkin's disease. Anti-anemic substances such as iron and liver extract are of no value in the treatment of anemia caused by leukemia, lymphoma and myeloma.

Urethane⁶ produces clinical results comparable to those of radiation in a majority of patients with chronic myelogenous leukemia. Results are somewhat less satisfactory in chronic lymphatic leukemia. The enteric coated tablets are well tolerated by most patients in average doses of 1 gm. three times daily after meals. Often the dose can be reduced to 1 or 2 gm. daily for maintenance. Therapy must be continuous or relapse will occur quickly. The authors feel (without statistical proof) that patients cannot be maintained as long with urethane as with radiation and therefore reserve urethane for trial chiefly in chronic myelogenous leukemia which has become refractory to radiation. Chart 1 illustrates the prolongation of life by approximately one year in chronic myelogenous leukemia by use of urethane after x-radiation became ineffective.

Nitrogen mustard has produced very satisfactory remissions and it may be used as alternative therapy in patients who no longer respond to radiation. Nausea and vomiting have restricted its use but the authors have had surprisingly little trouble with this

From the Scripps Metabolic Clinic, La Jolla.

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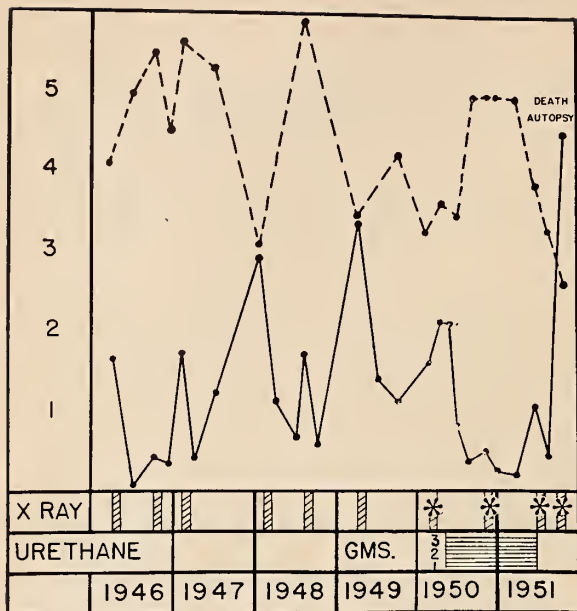


Chart 1.—Effect of urethane after patient no longer responded to x-radiation in a case of chronic myelogenous leukemia. The interrupted line indicates erythrocytes in millions per cu. mm. of blood, and the continuous line leukocytes in hundred thousands per cu. mm. X-ray therapy without response is indicated by asterisks. The patient was a man 26 years of age.

complication when 0.2 gm. of Amytal Sodium® are given by mouth at the end of the intravenous infusion.

Triethylene melamine (TEM),⁹ a 5 mg. tablet with nitrogen mustard-like effects, can be given by mouth with little difficulty from nausea and vomiting. It offers considerable promise as a convenient method of treatment. However, it is a powerful bone marrow depressant and more experience will be necessary before it can be released for general use.

Monocytic leukemia often runs a subacute course and is resistant to therapy, although more chronic types may respond to x-radiation.

The authors have had poor results in general with the treatment of chronic leukemia in patients who have leukopenia at the outset. However, therapy should always be attempted as some patients will respond satisfactorily to radiation.

Acute Leukemia

The treatment of acute leukemia, regardless of cell types, remains unsatisfactory. (Although the authors are inclined at times to recommend no treatment, this is a recommendation that patients' relatives will not accept.) Now there are two specific agents which influence the disease, although results are often disappointing.

Aminopterin* and other folic acid antagonists can be given conveniently by mouth and they will

* Supplied through the courtesy of Lederle Laboratories, Division of the American Cyanamid Co., New York, N.Y.

produce remissions, often of several months' duration, in 25 to 50 per cent of children. Such remissions are uncommon in adults. Toxic manifestations such as stomatitis, diarrhea, skin and mucous membrane hemorrhage, pancytopenia and alopecia may be troublesome or disastrous.¹⁰ Aminopterin is given in average doses of 0.5 mg. daily until improvement is noted or toxic symptoms appear. Either effect is usually apparent within two weeks. It is customary to stop the drug when improvement occurs, as there is little evidence that maintenance therapy prolongs remission. Therapy may be reinstituted when signs of relapse occur, but the results of subsequent courses of treatment are often less satisfactory.

Hormone therapy with corticotropin (ACTH) or cortisone produces a gratifying sense of well-being, and remissions are obtained in about 50 per cent of patients. The remissions are often short and may last only a few days or a few weeks. Restriction of the dietary intake of sodium chloride to 1 gm. or less per 24 hours is necessary to prevent troublesome edema. Supplementary therapy with enteric coated tablets of potassium chloride, 3 to 8 gm. daily, will offset increased potassium loss owing to use of these hormones. Results of the alternate use of hormones and folic acid antagonists have been reported recently.⁷

Multiple Myeloma

Multiple myeloma is one of the most malignant and painful tumors of the blood-forming organs. An occasional case with a more benign course is seen, but management of patients with this disease has always been difficult. X-radiation has afforded some relief in the past but urethane is the best treatment available at this time.⁴ Urethane is not effective in all instances and gastrointestinal intolerance prevents its use in some patients. Three or 4 gm. are given daily for treatment, and maintenance doses of 1 to 3 gm. daily may be given for long periods. Leukopenia occurs frequently when the drug is given on that schedule, but it is tolerated well. Favorable response—general improvement and relief of bone pain and anemia—usually begins within two or three weeks. Recalcification of bone lesions may occur during urethane therapy (Figure 1). The authors employed prefrontal lobotomy with success for the relief of intractable bone pain in one case of myeloma. In the management of a patient treated recently, corticotropin and cortisone were useful for the control of pain while waiting for urethane effects.

Polycythemia Vera

Radioactive phosphorus, given in small doses of about 3 millicuries by mouth, appears to be the simplest and most effective treatment for polycythe-



Figure 1.—Recalcification during urethane therapy for multiple myeloma in a white woman 63 years of age.

Choice of Therapy in Leukemia, Polycythemia, and Lymphoma

	X-Ray	P ₃₂	Urethane	HN ₂	Cort. ACTH	Aminopterin
Chronic leukemia, myelogenous.....	1	1	2	3	..	..
Chronic leukemia, lymphatic.....	1	1	3	2	..	..
Acute leukemia, all types.....	..	..	..	..	1	1
Multiple myeloma	2	..	1	..	..	..
Polycythemia vera .....	..	1†	..	..	..	..
Lymphosarcoma	1	3	..	2	..	..
Giant follicular lymphoma.....	1	3	..	2	..	..
Hodgkin's disease	1	..	..	2	..	..

Key: 1 = first choice; 2 = second choice; 3 = third choice.

† Combined with venesection.

mia. As effects do not become apparent for 30 to 60 days, preliminary venesection to reduce the blood cell volume to about 55 per cent of the whole blood is done for immediate relief of symptoms. Patients may be retreated at intervals of three months with 2 or 3 millicuries of radioactive phosphorus and venesection may be repeated if necessary. Remissions for two years or more have been produced by this method.³ The authors had excellent results during a short follow-up period up to two years in ten of eleven cases.

Lymphosarcoma, Giant Follicular Lymphoma and Hodgkin's Disease

Radical surgical removal of solitary tumors with the hope of an occasional cure has been revived recently.² The operation should be followed by heavy local radiation. This method had not been looked upon with favor, as recurrence at other sites usually took place. The subject is a controversial one, but enough "cures" of five years or more have been reported to recommend serious consideration for an occasional carefully selected case.

X-radiation is the treatment of choice for lesions of the lymphoma group. Results with radioactive

phosphorus have been disappointing in most hands, although Block and Jacobson¹ considered it as effective as x-ray in lymphosarcoma and giant follicular lymphoma.

Nitrogen mustard deserves an important place in the treatment of Hodgkin's disease, especially if the patient has severe toxic symptoms and widespread disease. It is useful for the rapid relief of symptoms of acute pressure, especially in the case of mediastinal obstruction where x-ray therapy may be dangerous. Nitrogen mustard is generally less effective in lymphosarcoma and giant follicular lymphoma than in Hodgkin's disease. However, it deserves a place as alternate trial therapy in these conditions. Melamine has shown considerable promise as a convenient palliative agent in the treatment of Hodgkin's disease. Corticotropin and cortisone have been of little assistance, but the authors have seen an excellent result of six months' duration in one case of Hodgkin's disease which had become resistant to x-ray.

The anemia caused by leukemia, lymphoma and myeloma responds only to specific therapy and transfusions. Antianemic substances such as iron and liver extract are of no value.

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A.M.E.F. Funds Total More Than \$886,430

CONTRIBUTIONS to the American Medical Education Foundation in 1952 totaled more than \$886,430. This includes an American Medical Association grant of \$500,000 voted by the House of Delegates in December 1951 at Los Angeles. In all, 6,739 contributions have been recorded from 6,697 individuals, 11 laymen and 31 organizations.

Distribution of Class A grants for the 79 medical schools in the country was made in August—\$15,000 for each of the 72 four-year schools; \$7,500 for each of the six two-year schools, and \$11,250 for one three-year school.

Particularly encouraging . . . contributors up 4,863 over 1951 . . . total receipts up \$140,513 over 1951.—From *A.M.A. News Notes*.

The Treatment of Hypospadias

DONALD R. SMITH, M.D., San Francisco

WHILE no new principles in the repair of hypospadias have been evolved for many years, the old ones are being applied more efficiently and the repair of hypospadias is now highly successful. During the past ten years eleven authors have published reports of fifteen or more cases* and this has supplied data for more critical judgment of the various techniques now being espoused.

To be adjudged satisfactory an operation must afford, above all, a straight penis when the organ is completely erected. Anything less than this is inadequate. The urethral orifice must not open posterior to the corona, else ejaculation may be so shallow as to impair fertility. The urethra should not bear hair. Of equal importance, and it is here that urethroplasty often fails, is the formation of a urethra of such caliber that urethral dilatation is unnecessary.

The soundness of an operation for hypospadias may be judged by the principles upon which it is based. In no other urologic procedure is attention to careful surgical technique so necessary. Tissues must be handled gently and skin flaps and tube pedicles must have an adequate supply of blood. There must be no tension on suture lines, and only the finest of suture materials should be used. Juxtaposition of the urethral suture line and that of the covering skin should be avoided, for experience over the years has shown that in an undue number of cases urethral fistulae will result. At the conclusion of the operation, hemostasis should have been obtained, and when skin flaps have been used pressure dressings are indicated.

THE CAUSE AND TREATMENT OF CHORDEE

Almost every paper treating of hypospadias contains a fable as to the cause of chordee. Authors describe, and medical illustrators depict, a heavy band of fibrous tissue extending from the abnormal urinary orifice to the glans. This band is spoken of as the rudimentary corpus spongiosum and it is said that contracture of it bends the penis ventrally. This is not so. The author, who has repaired chordee in 48 boys with hypospadias of varying degrees, has seen such fibrous bands in no more than three in-

• With recent improvements in techniques, the operative cure of hypospadias has been much improved and a satisfactory cure of this defect can be anticipated. This paper discusses the most promising types of surgical repairs and presents a method which has been particularly successful in almost 50 cases.

stances, and those were in boys with scrotal hypospadias. In a few cases the corpus spongiosum is absent and the urethra is firmly attached to the corpora cavernosa. For the most part, the distal urethra is entirely external to the spongiosum which can be seen as a normal soft midline body extending to the glans.

Normally, the skin of the penis slides loosely on the shaft. In hypospadias, the ventral skin distal to the orifice does not slide; it is firmly adherent to the shaft, and it is this which is the major cause for chordee. In other words, merely freeing the skin from the shaft distal to the abnormal orifice will completely reduce the chordee in most cases. On occasion, the ventral curvature is further increased by fibrous tissue lying between the corpora cavernosa and the normal corpus spongiosum. These bands, when present, must be resected. It is obvious, then, that chordee can only be corrected if the ventral skin is dissected widely off the shaft. The Duplay (Heineke-Mikulicz) procedure is therefore to be condemned.

Blair¹ and Nesbit²¹ described operations which are adequate for the correction of the chordee and which, at the same time, swing preputial skin to the ventrum to cover the denuded area which results from the correction of the curvature. There is little to choose between them. The author has found Blair's method to be simple and sound.

FORMATION OF THE URETHRA

Four methods of urethroplasty are in vogue.

A. *Urethroplasty using penile skin.* The oldest and most commonly performed of the operations employs ventral penile skin to form a urethra. As it is usually practiced, it cannot fulfill the tenets of a proper repair for several reasons. Since the new urethra is covered with the lateral penile skin flaps, it cannot but be of small caliber. Also there is tension

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Chairman's Address: Presented before the Section on Urology at the 81st Annual Session of the California Medical Association, Los Angeles, April 27-30, 1952.

* References 3, 5, 11, 16, 17, 19, 20, 23, 25, 27, 29.

upon the skin closure, particularly during the first two or three days after operation when edema is present. Moreover, the juxtaposition of suture lines leads to multiple fistulae. Even the Cecil modification has failed to correct the inherent errors appreciably.^{6, 9, 10, 12} Only Byars,⁵ who has used it in 52 cases, has had success with this method. However, the adequacy of the caliber of the urethra so formed must be questioned. There just isn't enough skin to go around.

Penile and preputial skin is ideal for the formation of a new urethra, for it is in situ, is blessed with the necessary resiliency and is non-hair bearing. If it is used, however, skin must be obtained from elsewhere to replace that taken for the new urethra. The scrotum is the logical source for a skin cover which allows the formation of a urethra of large caliber without the development of tension. Furthermore, the suture lines can be staggered.

Blair covers the new urethra with a flap of skin raised from one side of the scrotum. The author has used this type of repair in 18 cases and has found it excellent.^{24, 25} It requires operation in three stages. Wehrbein²⁸ prepares a skin tube on the scrotum in conjunction with the first stage operation, and at the second procedure a new urethra is formed and is covered with the skin forming the tube pedicle. Analysis of the principles upon which it is based shows this to be a sound two-stage procedure. Goodhope^{14, 15} also described the operation but did not say how often he had used it.

In 1946 Cecil⁸ published a report on an operation which differs from the Blair method in that the new urethra is covered with a flap of skin from each side of the scrotum. Three operations are required for its execution. Culp¹¹ has recently reported on experiences with this method in 19 cases. Although he noted no permanent urinary fistulae, a few will undoubtedly occur.

B. Urethra made from a free inlay graft (Nové Josserand procedure). Only plastic surgeons^{16, 20, 29, 30} have been enthusiastic about this method of repair which has largely been dropped from the surgical repertoire because of the frequency of strictures and fistulae. Some time after the successful repair of chordee, a split thickness graft is taken from a non-hair bearing area and is placed (raw^a side out) about a rubber tube. The ventral skin is freed from the shaft of the penis by tunnelling with a trocar which is then made to pierce the glans. In this bed is placed the graft. Later it is necessary to anastomose the proximal end of the new urethra to the hypospadiac one (Young and Benjamin^{29, 30} anastomosed them primarily with indifferent success). Three operations, then, are required. The theoretical objection to this procedure has to do with the

straightness of the penis with erection. Some degree of longitudinal contracture is to be expected in the healing process. But, even more important, where is the resiliency which will allow an increase of 40 per cent in its length as required with an erection? The author has had but limited experience with the Nové Josserand procedure but has not been satisfied with the functional (sexual) result. This objection applies particularly to the procedure as practiced by Young,^{29, 30} who chooses to lay the graft when the child is only three years old.

C. Operation of Duplay-Marion (subcutaneous skin strip). More than 70 years ago Duplay¹³ described a procedure in which he made two longitudinal incisions ventrolaterally and instead of suturing the edges together to form a midline tube he merely placed a catheter on the surface of the skin between the lines of incision and sutured the lateral edges of the skin together over it, thus burying the skin strip. He used interrupted and double-locking sutures for this closure. That he had at one time used the dorsal relaxing incision was indicated by his statement that he had given it up.

Cecil⁷ cited this operation in a monograph published in 1936. In 1942 Marion and Pérard¹⁸ described it in great detail and credited Duplay as its originator. They considered it to be the operation of choice although they did not state the number of cases in which it had been used, nor did they mention complications.

The following analysis of Marion's experience with the procedure was made on the basis of personal communication with him.¹⁹ Excluding cases of the balanitic type, he has operated to correct the defect in 48 boys. In four cases the defect was of the perineoscrotal type and was repaired in three stages: (1) Correction of the chordee. (2) Cystostomy; formation of the new canal by means of a buried skin strip. The new and old urethrae were not joined. (3) Closure of the fistula. In 18 cases the opening was penoscrotal and in 26 it was penile. In those cases Marion chose to join the new urethra to the old at the second (and final) stage after diversion of the urine by cystostomy. Urethroplasty had to be repeated in five cases. The operation was entirely successful in one-third of the remaining cases. In the other two-thirds a fistula formed and a third operation had to be done to close it. Marion stated, however, that the ultimate results were uniformly excellent.

Browne^{2, 3} made reports on such an operation in 1949 but did not include a bibliography and did not mention Duplay or Marion. As repair of this type, judged in the light of accepted surgical principles, does not seem to be entirely sound, it should be judiciously scrutinized.



Figure 1.—First stage. Typical deformity showing chordee, abnormally placed meatus, and redundant dorsal foreskin. Dotted lines indicate incision. (From Smith and Blackfield, Surgery, 1952.)

The first stage, as described by Browne, is of the Duplay (Heineke-Mikulicz) type and does not permit adequate exposure of the ventrum. Ventral tension is relieved by a longitudinal dorsal incision which is left to granulate. At the second operation, the strip of skin which is to be buried is outlined. (Although logically the strip of skin should be made quite wide since the width determines the circumference of the new urethra, Browne's illustrations depict a very narrow strip, which would of necessity afford a urethra of small caliber; and in his two articles he made no mention of the diameter of the urethra obtained.) The lateral skin margins are then approximated widely over the "urethra" and tension is again relieved by another long dorsal incision. Browne said that the new urethra becomes soft after a year or so—a statement that may be taken as an index of the amount of tissue reaction which follows upon this procedure. He is in error in saying that the operation is applicable to hypospadias of all degrees, for if it is applied to the scrotal and perineal types, a portion of the buried strip will bear hair. Only a split thickness inlay graft placed in this area will answer this problem satisfactorily. Browne reported on 50 boys treated by the Duplay-Marion procedure. Fistula developed in three patients—two of whom were operated upon by other surgeons. As it may be

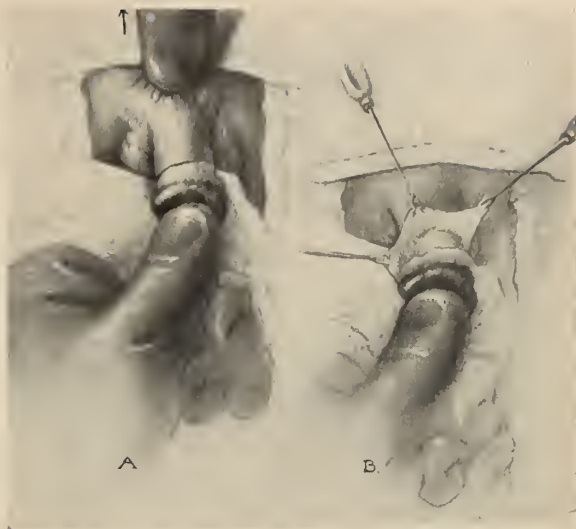


Figure 2.—Circumferential incision just proximal to corona. Foreskin is dissected from the shaft. Note that all flaps are handled with small double hooks. The use of "eye" scissors for this dissection is suggested. (From Smith and Blackfield, J. Urol., 1948.)

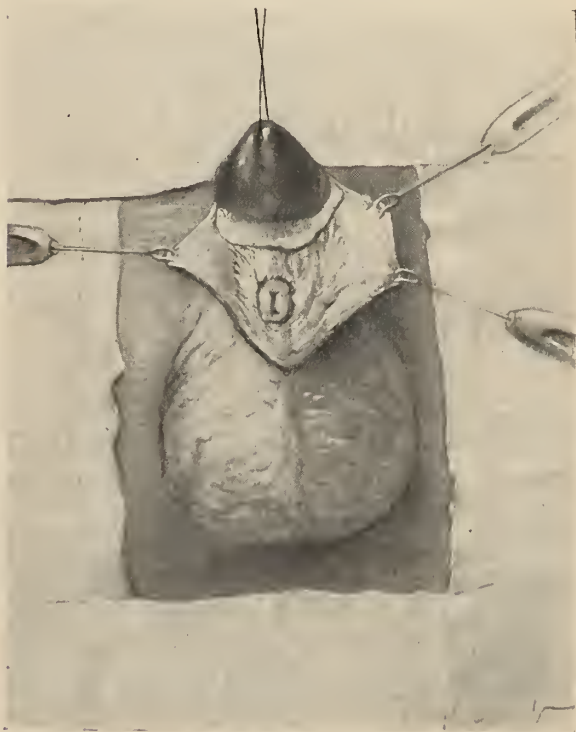


Figure 3.—Incision carried proximally on ventrum surrounding meatus. At times it is necessary to extend it beyond the meatus; if so, a considerable cuff of skin should be left about meatus so that suture lines do not encroach too closely upon it—meatal stricture might result. Skin flaps are freed by dissection with small scissors. The skin distal to the meatus is thin and plastered to underlying corpora. This is the major cause for the chordee. Small fibrous bands are occasionally present between the corpus spongiosum and the cavernosa. (From Smith and Blackfield, J. Urol., 1948.)

surmised that other surgeons operated in only a minority of the 50 cases, there is a suggestion of rather high incidence of fistula. Byars, who widely approximates the lateral skin edges over a completely formed urethra, reported development of fistula in 23 per cent of the patients operated upon. Should a lesser incidence of fistula be expected following the Duplay repair? Marion's experience suggests that a significant number of fistulae are to be expected. It is to be hoped that in the near future others will publish the results obtained by this method with particular reference to the incidence of fistulae, an appraisal of the straightness of the penis upon erection, and the caliber of the urethra. Until then, judgment should be reserved.

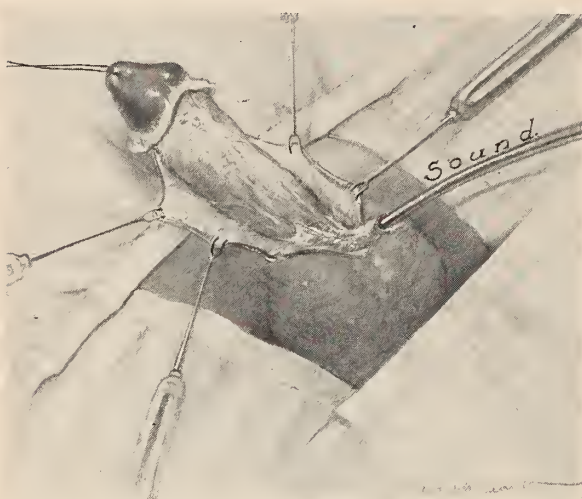


Figure 4.—Elongation of ventrum has been obtained. It may be necessary to free the distal urethra and shift it posteriorly to complete the correction of the chordee. (From Smith and Blackfield, *J. Urol.*, 1948.)

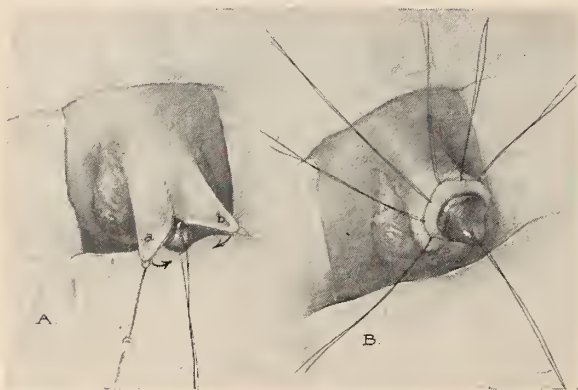


Figure 5.—*A*, Area of ventrum thus increased requires more skin for cover. This is obtained by separating double fold of foreskin, thereby converting it into single layer. This redundant flap is split down midline 2 to 3 cm. so that *a* and *b* meet at frenum without constricting shaft, yet affording an adequate and loose cover for ventrum. If more is needed here, the dorsal slit is further deepened. *B*, Adjacent skin edges sutured. (From Smith and Blackfield, *J. Urol.*, 1948.)

D. The operation described by Ombrédanne still has its adherents^{17, 23, 27} although it does not seem to be based on sound principles or to have satisfactory final result. Fistula develops in a significant number of cases.

THE BLAIR-WEHRBEIN-DUPLAY OPERATION

The author has carried out or supervised the repair of hypospadiac deformities in 44 boys by the principle of urethroplasty from ventral penile skin with scrotal skin as a cover. Eighteen of the patients were treated by a previously described²⁴ modification of the Blair procedure. Then in 1947 the author changed to a technique which seemed simpler than the Blair procedure and which was carried out in

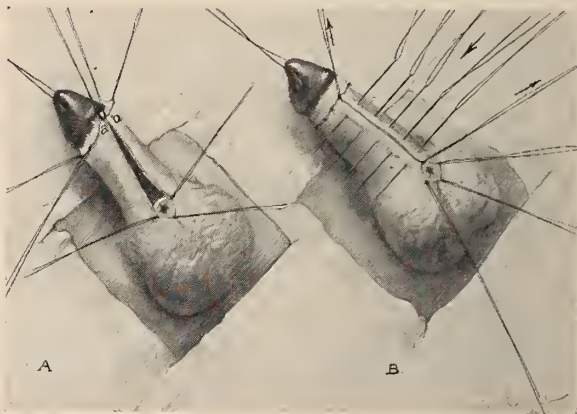


Figure 6.—Ventrolateral skin closed; dorsal flaps *A* and *B* are now on ventrum. Note relative posterior displacement of meatus due to elongation of corpora. (From Smith and Blackfield, *J. Urol.*, 1948.)

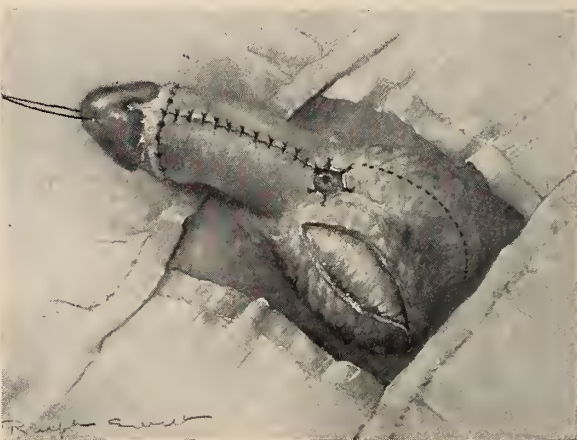


Figure 7.—Formation of scrotal tube pedicle. The width of the flap is equal to at least one-half the circumference of the penis and should be marked out without any traction placed on the scrotum. A tube of too small diameter is worthless. The proximal ends of the incisions should extend to the level of the meatus if it is at the penoscrotal junction. If the meatus is on the shaft, the tube should terminate at the penoscrotal junction. Its length should slightly exceed the length of the penis. (From Smith and Blackfield, *Surgery*, 1952.)

two stages rather than in three. In this operation the first stage is as described by Blair (Figures 1-6) but in conjunction with it a tube pedicle, as suggested by Wehrbein, is made from the skin of the scrotum (Figures 7-9). The first stage is carried out preferably when the child is 18 months old.

When the patient is four years old (or six months after the first stage if he is older) the final operation is done. A wide flap, equal to about two-fifths to one-half of the circumference of the penis, is outlined and the urethroplasty is completed (Figure 10). Ordinarily the urethra thus formed will permit the passage of a No. 22 (French) sound. The denuded ventrum is then covered by scrotal skin (Figures 11, 12). By this principle a generous urethra can be formed.

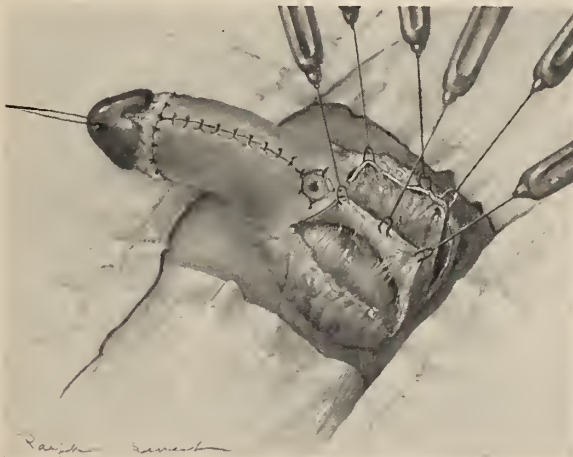


Figure 8.—The skin is freed from the scrotum with scissors. The catheter should be placed at this time so that the urethra will not be accidentally injured. (From Smith and Blackfield, Surgery, 1952.)



Figure 9.—Formation of the tube pedicle. A pressure dressing is applied with the penis in the dorsal position. The dressing and catheter are removed in 8 days. (From Smith and Blackfield, Surgery, 1952.)

The complete operation done in this fashion has been carried out on 26 boys, while an additional four have had the first stage only. Healing occurred without fistula in 22 cases (85 per cent). Most of these operations were performed by the resident staff, an indication that the success of this procedure does not depend upon the skill of one surgeon with

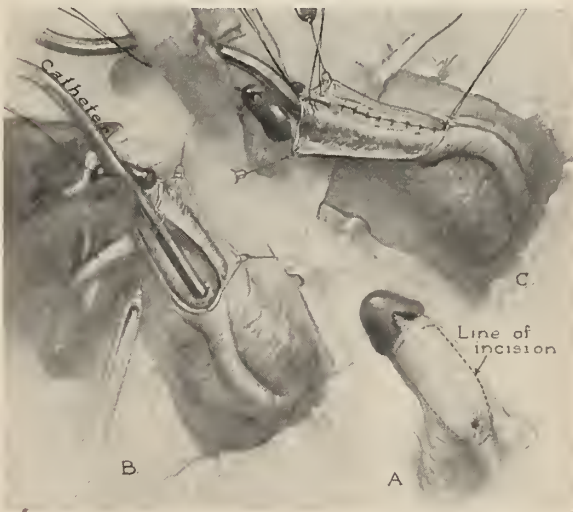


Figure 10.—Second stage. A U-shaped incision is made. The width of this flap should equal two-fifths to one-half the circumference of the penis, thus furnishing a urethra of wide caliber. A small catheter is placed in the bladder. The urethra is formed with Lembert sutures of No. 0000 ureteral gut on atraumatic needles. Care is taken to invert the edges. The urethra in the region of the abnormal meatus should be further reinforced with a second suture layer, for fistula sometimes develops there. (From Smith and Blackfield, Surgery, 1952.)



Figure 11.—Distal end of tube divided. A cleavage plane is formed down its core from the penile end and the tube is opened. If the meatus is on the penile shaft, the proximal penile skin is incised in the midline and this incision is extended into the tube. (From Smith and Blackfield, Surgery, 1952.)



Figure 12.—Flap is hinged at penoscrotal junction, placed on ventrum and sutured to lateral and distal skin edges. There is no juxtaposition of urethral suture line and that of covering skin. Pressure dressing is applied with penis in dorsal position. Catheter and dressing are removed 8 days later. (From Smith and Blackfield, *Surgery*, 1952.)

extremely specialized experience, but must be attributed to its simplicity and to the soundness of the principles employed.

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Congenital Heart Disease in Cyanotic Children

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AS A RESULT of newspaper publicity during recent years almost every mother knows something about "blue babies." As it is not difficult to detect cyanosis even when confined to the lips and fingers, a child may be taken to a physician because of this symptom alone. In some cases the child is cyanotic from birth; in others after a few months of normal life, cyanosis begins to appear on crying. The cyanosis is deep and constant in some cases, while in others it appears only after exertion.

If it is reported that the child squats after unusual exertion, tetralogy of Fallot should be suspected. On the other hand, if cyanosis is relatively mild but the child is greatly incapacitated, pulmonary stenosis with intact interventricular septum—so-called pure or isolated pulmonary stenosis—may be present.

A general physical examination of weight, height, nutrition and disposition gives an immediate impression of the severity of the disease, but attention should be directed primarily to the heart sounds. Usually in a patient with tetralogy of Fallot or pure pulmonary stenosis or tricuspid atresia, a rather brisk, short, rasping systolic murmur may be heard over the precordium and to the left of the sternum at the second or third interspace. If the murmur is heard in diastole it is not typical of those conditions and probably indicates a diagnosis beyond the ability of most general practitioners. If no murmur can be heard and the cyanosis is deep the child very likely has atresia, not stenosis of the pulmonary artery, and is surely a poor operative risk.

The number of erythrocytes in the blood of cyanotic children varies from 5 to 11 million per cubic millimeter and the hemoglobin content is correspondingly high.

Roentgen examination and electrocardiographic studies are most important:

1. A child with tetralogy of Fallot usually has a boot-shaped heart because of a concavity at the base of the heart on the left in the region of the pulmonary segment, but the heart may be normal in shape, especially if the symptoms are mild. Rarely in this disease is the heart much enlarged. If it is, some complicating condition or another cardiac anomaly

• Cyanosis is often the only apparent symptom of congenital heart disease for which a child is brought to a physician. Some of the more common anomalies can be diagnosed from this and other symptoms by a general practitioner. Squatting after exertion is a sign of tetralogy of Fallot; severe disability with relatively mild cyanosis may indicate pure pulmonary stenosis. A brisk, short, rasping systolic murmur is characteristic of these conditions and of tricuspid atresia.

Tetralogy of Fallot is further symptomatized by a boot-shaped heart, not greatly enlarged, and right axis deviation on electrocardiograms. Typically the lung fields are clear. The author's treatment of choice is aortic-pulmonary or subclavian-pulmonary anastomosis as indicated, preferably done after the child is three years old if the condition is not so severe as to require earlier operation.

Pure pulmonary stenosis, which in some cases cannot be distinguished from tetralogy of Fallot except by cardiac catheterization and angiocardiology, may in more typical cases be diagnosed by convexity rather than concavity in the pulmonary segment and by differences in electrocardiograms. An expanding valvulotome is used to open the stenosed pulmonary valve, which is then dilated.

A systolic murmur, a round heart and left axis deviation are usually found in tricuspid atresia. Shunt operations performed for relief of this condition may lead to later heart failure because of the devious rerouting of blood through the heart.

The operations here outlined and others are statistically evaluated.

may be present, and shunt operation should be avoided if possible because children with enlargement of the heart do not tolerate this operation well. Typically in tetralogy of Fallot an electrocardiogram shows deviation of the axis to the right, manifesting right heart strain, while the lung fields appear clear on fluoroscopy as well as in x-ray films.

2. Pure pulmonary stenosis is symptomatically similar to tetralogy of Fallot although the patho-

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logic changes and the treatment are quite different. The child is usually more incapacitated than would be expected from the degree of cyanosis. The pathologic change is practically limited to the valve of the pulmonary artery, where the cusps are partially fused and thereby form a barrier to the flow of blood. In tetralogy of Fallot there is a septal defect which allows escape of blood to the left ventricle, but in patients with pure pulmonary stenosis the septum is intact and the only escape for the blood dammed by the stenotic pulmonary valve is through a patent foramen ovale. Consequently x-ray films of the heart usually show enlargement with *convexity* in the region of the pulmonary segment. The electrocardiogram indicates marked right heart strain and a high P wave in lead II. As in tetralogy of Fallot, the lung fields usually are clear.

3. Tricuspid atresia is not very common. The history and general symptoms mimic those of the tetralogy of Fallot. Because the tricuspid valve is occluded, blood returning from the body must go from the right auricle through a patent foramen ovale to the left auricle and thence to the left ventricle. From there some of the blood is pumped into the aorta and some of it goes through a ventricular septal defect into the pulmonary artery. It is obvious why children with this disease are greatly incapacitated and are usually brought to the physician during infancy. The heart is round and the right ventricle diminutive, not hypertrophic as in tetralogy of Fallot; consequently the electrocardiogram indicates *left* heart strain. A cyanotic infant with a systolic murmur, a round heart, clear lung fields and deviation of the axis to the *left* probably has tricuspid atresia.

The above are the cardinal points in the diagnosis of the more common types of cyanotic heart disease which are amenable to operation. Space does not permit discussion of transposition of the great vessels, persistent truncus arteriosus and a number of less common anomalies seen in infants and to date not successfully treated surgically. Detailed information on diagnosis is available in Dr. Helen Taussig's "Congenital Malformations of the Heart."

When should cardiac catheterization be done and when should angiocardiograms be made? Only when a definitive diagnosis cannot be made without them. The typical case of tetralogy of Fallot or tricuspid atresia requires neither study. Differentiation of somewhat atypical tetralogy of Fallot from pure pulmonary stenosis usually requires both, and even with this aid a positive diagnosis cannot always be made. Differentiation of transposition of the great vessels from tetralogy of Fallot likewise occasionally demands these methods. Both procedures are valuable but not by any means conclusive. Nothing

take the place of the clinical acumen of a well trained cardiologist. It must be remembered that angiocardiograms show only fleeting shadows, not always true images. Furthermore, angiocardiology is not without danger.

Surgical relief of cyanosis due to congenital heart disease was brilliantly introduced by Blalock and is now accepted. At present surgical procedures are used in three diseases to increase the flow of blood to the lungs.

In tetralogy of Fallot, if the general condition of the child is such that it can thrive and not be in danger of cerebral accidents it is advisable not to operate before the child is about three years old, as later discussion of mortality rates will explain. However, if it is obvious that the child cannot live without relief, the operation should be done regardless of age, and should be done regardless of the child's condition if it can be demonstrated that the cause is diminished flow of blood to the lungs.

The operator will probably use the surgical technique with which he is most familiar. The author opens the chest through the left fourth interspace in all cases except for infants below one year of age whose aortic arch is on the right. If the child has a left aortic arch an aortic-pulmonary anastomosis is done. If the arch curves to the right, the innominate artery being on the left, a subclavian-pulmonary anastomosis is done. In infants below one year of age the subclavian artery is too small for a suitable anastomosis and therefore—if the arch curves to the right—aortic-pulmonary anastomosis is done on the right side. An aortic-pulmonary anastomosis on the left side is technically simple, whereas on the right side it is difficult because the pulmonary artery is short and runs at almost a right angle with the aorta.

Brock of England has advised a transventricular approach to the stenosis and with a rongeur forceps blindly nips out bits of tissue in the obstructing infundibular region. Theoretically it is logical to attack the stenosis, the most significant pathological condition. Practically it is very difficult to know what one is doing when blindly and hastily cutting tissue out of the inside of the heart. The far greater mortality accompanying intracardiac surgery as compared with one of the shunt operations makes the latter procedures very emphatically preferable. When it will become possible by means of artificial heart and lungs safely to deflect the flow of blood from the heart, then intracardiac surgery for the treatment of tetralogy of Fallot will undoubtedly be the procedure of choice.

Tricuspid atresia to date is best treated by one of the shunt operations. However, the results are not highly satisfactory because of the devious route the blood is forced to take through the heart. Cyanosis and other symptoms are relieved but the added

TABLE 1.—Mortality Following Operation for Congenital Heart Disease (aortic-pulmonary or subclavian-pulmonary anastomosis)

TETRALOGY OF FALLOT			
Age at Operation	Number	Deaths	Percentage
2 weeks to 3 years.....	133	20	16.0
3 to 16 years.....	161	4	2.5
Total	294	24	8.0
PURE PULMONARY STENOSIS			
23 days to 11 years.....	19	1	5.3
TRICUSPID ATRESIA			
11* days to 3 years.....	12	6	50.0
3 to 11 years.....	5	0	0.0
Total	17	6	35.0
EXPLORATORY OPERATIONS			
	25	11	44.0

* Five of the six deaths were in infants below six months of age.

strain on the heart may cause heart failure. Some surgeons have attempted to improve the flow of blood by enlarging the foramen ovale at the time the shunt operation is done. The added risk of this procedure offsets the possible postoperative improvement.

Pure pulmonary stenosis is treated successfully surgically only by the method advised by Sellors and Brock of England. An expanding valvulotome (devised by the author) is thrust through the right ventricle and guided through the stenotic pulmonary valve. Immediately there is marked improvement of the patient's condition. The valvulotome is then withdrawn and a dilator introduced to open the valve to the diameter of the pulmonary artery.

A shunt operation is definitely contraindicated in pure pulmonary stenosis because of the added load placed upon the heart. For example, tetralogy of Fallot was diagnosed in an 18-month-old child and an aortic-pulmonary anastomosis was done. A year later the child's heart was enormous. The error in diagnosis was recognized. A second operation was done in which the aortic-pulmonary anastomosis was taken down and the stenotic valve incised by introducing the valvulotome through the wall of the main pulmonary artery and directing it through the stenotic valve. The child made an uneventful recovery and the heart has decreased in size.

As to transposition of the great vessels, the mortality is so high and the results are so poor that any operation devised to date hardly seems worthwhile.

Much thought has been given this problem but no answer has been found, primarily because the coronary arteries arise from the pulmonary artery and even if the vessels could be reversed the coronary arteries cannot be moved to the aorta.

Because of various methods of grouping cases it is impossible to compare one set of mortality statistics with another. It has been the author's policy to divide the patients into two groups—those in the first three years of life and those above three years (Table 1). A few significant facts at once present themselves. The outlook for patients with tetralogy of Fallot operated upon after three years of age is good, with a mortality of only 2.5 per cent, whereas the mortality in children below three years of age is 16 per cent. Obviously operation should be postponed until the patient is more than three years old unless the disease is so severe as to outweigh the factor of higher mortality in younger children.

In previous reports on mortality, cases of tricuspid atresia were included in the group of tetralogy of Fallot. In this presentation they are considered separately and the operative mortality is 35 per cent.

If, for some reason such as absence or small diameter of the pulmonary artery, no blood can be shunted to the lungs, the exploratory procedure is followed by a very high mortality, 44 per cent.

Although a number of the patients with pure pulmonary stenosis were critically ill and seemed on the verge of heart failure, the mortality has not been high. In no other congenital heart disease are the results more spectacular.

Results following operation in general have been good. In answer to the question, not infrequently put, "Is the effort worth while?" the answer is definitely, yes. Not all patients do well; some have extensive postoperative enlargement of the heart and some die, but the large majority are tremendously improved. They can go to school, ride bicycles, and run and play with other children. To be sure, the heart muscle has been subjected to an added strain by the fashioning of an artificial ductus, but it seems to stand the strain very well. Life expectancy is far from normal, because the basic dysfunction has not been corrected and, what is more, a burden has been added; but follow-up studies on children who were operated upon in 1946 and 1947 suggest that cardiac enlargement is not progressive.

707 Fullerton Avenue.

Delayed Films in Bronchography

A Preliminary Report

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A 68-YEAR-OLD MAN, with a history of cough and expectoration, came to the Department of Radiology for bronchography in the fall of 1948. The technician did a poor job on the first films, so they were retaken 45 minutes later. Although the patient had coughed up some of the oil and driven some into the alveoli, normal bronchial branches were now demonstrated in the lingula, which before had not been filled. Thereafter, delayed films were tried on many patients.

Method

After postural drainage and local anesthesia, a flexible rubber catheter was passed into one or the other main bronchus and iodized oil injected, the patient being turned so that it ran into the lung in question. If injection of the other lung was also desired, it was done at a second visit. Prone or supine spot films were obtained, and then films were exposed with the patient sitting or standing. Thereafter, he was permitted to cough and talk. Thirty to 60 minutes later films were again exposed in the same position and projection as the first films.

Analysis

In each case, and separately for each lobe filled, the delayed film was compared with the immediate film and the results tabulated as: bronchi better demonstrated, bronchi less well demonstrated, bronchiectasis better demonstrated, oil in the alveoli, etc. To be recorded as satisfactorily filled, all segmental branches had to be traceable out to the periphery.

Results

The most satisfactory interval between immediate and delayed films was 30 minutes. The delayed films proved to be of value in one-third of the examinations. In some cases bronchiectasis not demonstrable on the immediate films was definitely diagnosed on the delayed films. In other cases a significantly better demonstration of branch bronchi in the delayed films permitted definite exclusion of bronchiectasis. Among cases in which the delayed films were re-

• In bronchography, the oil often does not fill all bronchial branches. Films taken 30 to 60 minutes later frequently complete the opacification of bronchi in lingula, middle lobe and lower lobes. Such delayed films may demonstrate bronchiectasis not shown initially, or may exclude bronchiectasis suspected on the first films.

corded as of no value (two-thirds of the examinations) were many in which the filling was entirely satisfactory on the immediate films. Delayed films were taken in those cases for the purpose of the investigation. In about half of them the lower lobe and middle lobe or lingula were still well filled at 30 minutes, but in very few was the original good filling of the upper lobes maintained. There was one case, however, in which the delayed film established the diagnosis of bronchiectasis in the right upper lobe.

The delayed films were most often of value when the disease was in the middle lobe. Figure 1 illustrates such a case. The patient, a 68-year-old woman, had been in the hospital many times since 1942 with productive cough, usually diagnosed as owing to bronchitis. She had many bouts of malaise and fatigue, usually accompanying upper respiratory tract infections. Results of physical examination were within normal limits in 1950 when bronchograms were made. Early filling was good except for the middle lobe. The delayed film showed marked saccular bronchiectasis there, with partial atelectasis. The middle lobe was resected and the diagnosis confirmed.

Success of delayed films in excluding disease is illustrated in Figure 2. A 46-year-old woman had coughed for many years, raising thick yellow sputum, occasionally blood-tinged. She complained of dull aching in the chest. No abnormalities were observed in a physical examination. Bronchography showed excellent filling of all branches in the right lung, except the posterior basal. The proximal portions of these, where they were filled, appeared irregular, and bronchiectasis was suspected. The delayed films showed normal tapering of these posterior

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branches and showed the suspicion to have been unwarranted.

Figure 3 demonstrates the improvement of filling to give a definite diagnosis. A 52-year-old man had cough that had gradually increased for five years. A cup or two of purulent sputum was raised daily. In the initial bronchogram there was some apparent pooling. The delayed films showed clearly the severity and extent of the bronchiectasis in the left lower lobe.

These preliminary studies show that delayed films may be of great value in some cases. Their primary purpose should not be to compensate for lack of care in the original examination. Every effort should be made to get complete filling of all lobes and segments (of the chosen side). Postural drainage beforehand, adequate anesthesia, the use of limited quantities of oil, care as to position and fluoroscopic control of the injection—all are essential in the technique of bronchography. There are cases, however,

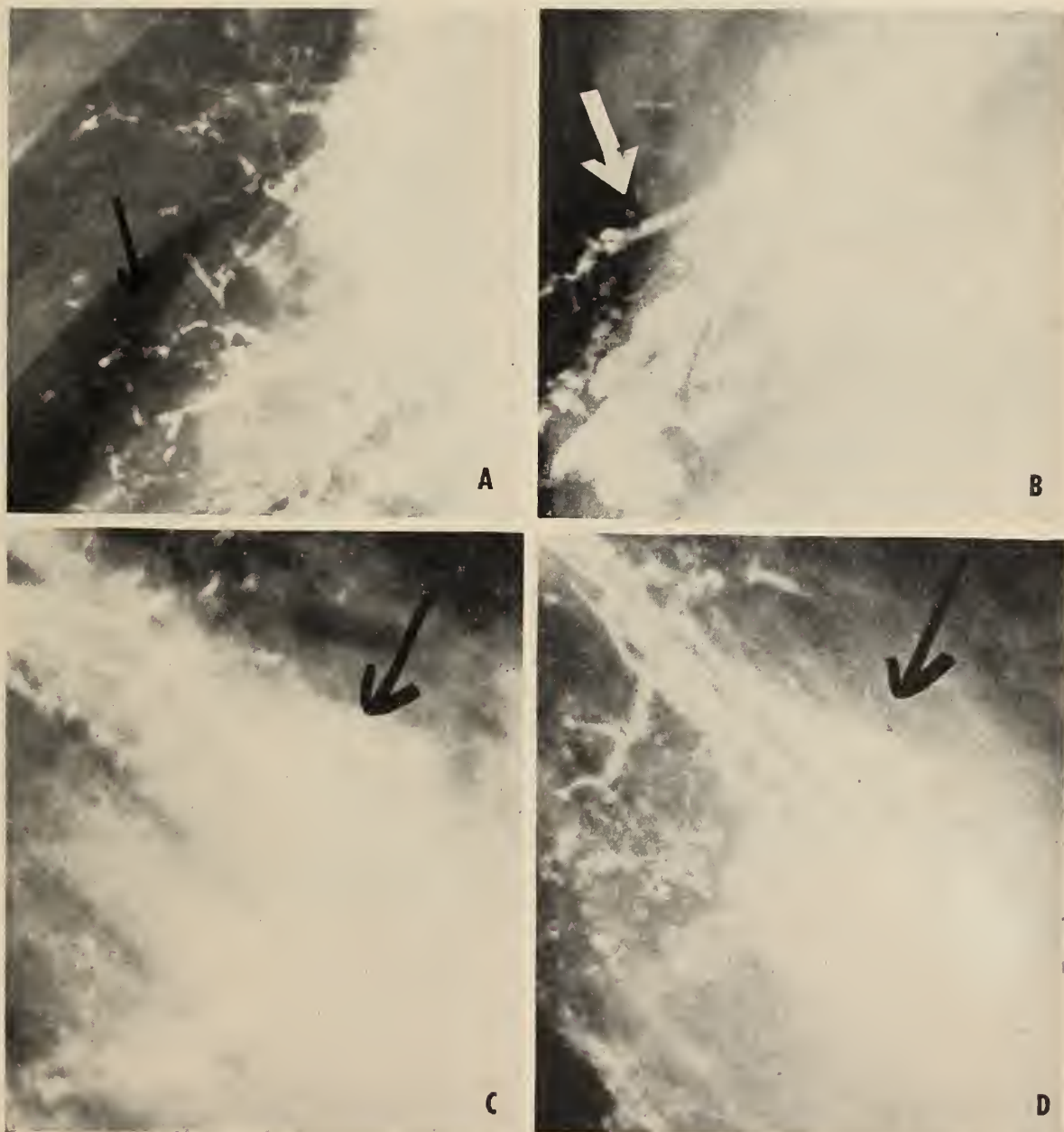


Figure 1.—Right middle lobe. Bronchiectasis established by delayed films. *a*, Left anterior oblique, original. *b*, Left anterior oblique, delayed. *c*, Right lateral, original. *d*, Right lateral, delayed. On the original films, the right middle lobe branches did not fill. The delayed films demonstrated marked bronchiectasis with partial collapse as evidenced by the clumping of the branches. The findings were confirmed at operation.

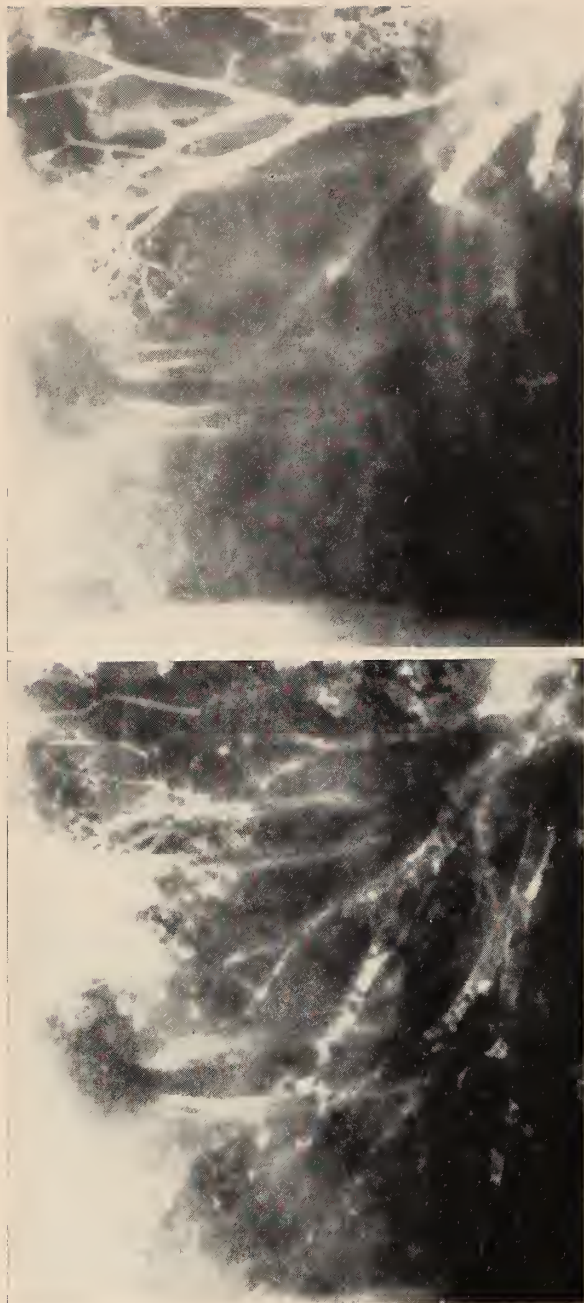


Figure 2.—Right lower lobe. Bronchiectasis excluded by delayed films. *Upper*, right lateral, original. *Lower*, right lateral, delayed. Some of the posterior basal segments did not fill in the original studies. The irregularity of outline of the proximal portions of these bronchi was considered suggestive of bronchiectasis. Delayed films showed normally tapering posterior basal branches.

in which the greatest care still gives only incomplete filling. Spasm of major bronchi and the presence of viscid secretions in them are probably the most frequent reasons for this. It is in such cases that taking delayed films may spare the patient a repetition of the oil injection. The patient's talking and coughing

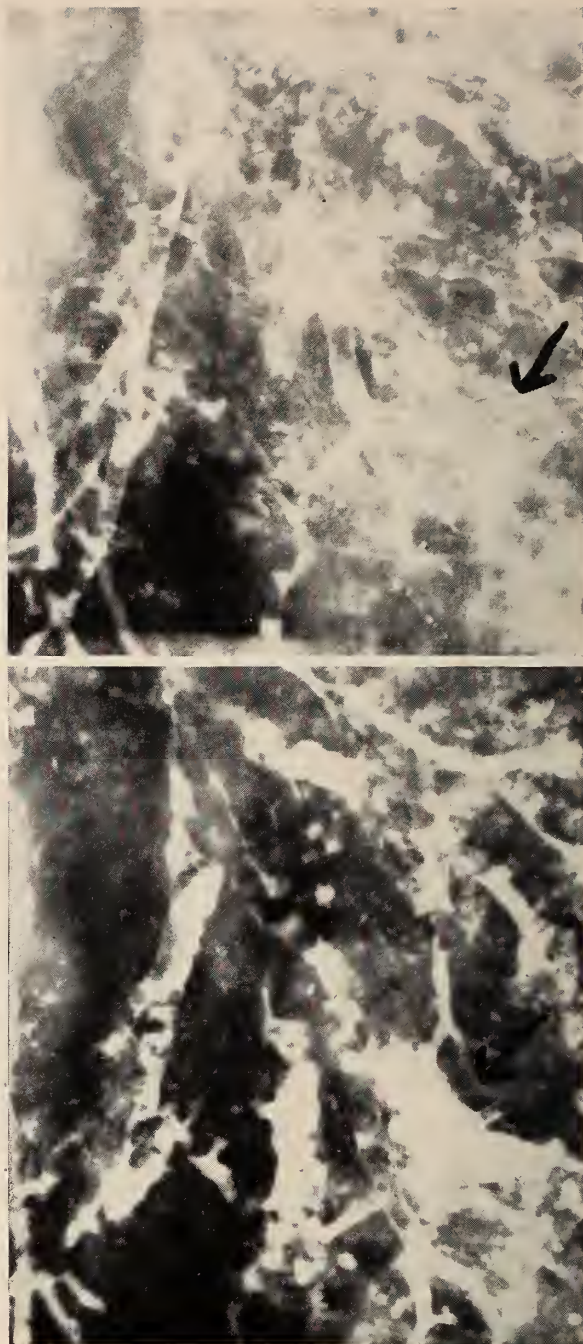


Figure 3.—Left lower lobe. Bronchiectasis established by delayed films. *Upper*, left lateral original. *Lower*, left lateral, delayed. Bronchiectasis was only suggested by pooling of Lipiodol® in the original studies. Delayed films demonstrated extensive bronchiectatic change.

in the interval may remove some oil and drive some into the alveoli, but the delayed film may still be useful. There is no reason to make delayed films when the first ones show complete filling of all branches under study.

1420 Jefferson Street.

Industrial Accidents

Some Medical Problems of the Industrial Accident Commission

J. L. BARRITT, M.D., San Francisco

EACH YEAR more than 500,000 industrial injuries are reported by California physicians. More than 145,000 of the injuries are disabling. The Industrial Accident Commission usually plays only a passive part so far as minor injuries are concerned but it comes actively into the picture in dealing with serious injuries and those in which controversy arises.

There are few physicians who do not do at least some industrial work. It is the purpose of this presentation to point out some of the commission's medical problems which arise in the handling of these cases.

In most cases the commission is dependent on the permanent disability reports sent in by industrial physicians. The prompt and equitable handling of injury cases depends largely on the adequacy of these reports.

Many physicians send in excellent reports. Some of the reports, however, while excellent from a clinical standpoint, are inadequate for the commission's purposes.

Probably the most common difficulty is owing to the fact that different physicians use entirely different methods of measuring and reporting disability. While each of these methods no doubt has its advantages, the lack of a common yardstick of measurement makes uniformity of rating very difficult.

Several years ago the California Medical Association sponsored a committee which was set up to solve this problem. The committee, headed by Dr. Packard Thurber, did an excellent piece of work in working out a standard method of measurement and nomenclature. While it is impossible to devise a method that will suit everyone, the committee's work was carried out by experienced industrial physicians and it is doubtful that a better basis for standardization could have been obtained. The committee's method has been accepted as standard by the Industrial Accident Commission.

A number of meetings have been held for the purpose of familiarizing physicians and insurance personnel with details of the standard method. Further meetings are being arranged and any medical or

• *The Industrial Accident Commission is dependent on reports of physicians for the prompt and equitable handling of industrial injury cases.*

Sometimes medical reports are inadequate for commission purposes. Among the more frequent inadequacies are: (1) Failure to use the commission's standard method of measuring and recording disability. (2) Inadequate description and evaluation of subjective complaints. (3) Failure to give estimate of normal, in the case of bilateral extremity injuries.

Physicians can help the injured person, the employer and the Industrial Accident Commission by considering report requirements.

insurance group wishing to arrange for one of these meetings is invited to correspond with the commission.

The committee's method is described in a book entitled "Evaluation of Industrial Disability," which is on sale at book stores. While attendance at one of the meetings should be helpful, the book covers the subject quite well.

Use of the standard method of measuring and reporting will result in a much easier handling of cases with benefit to everyone concerned. Most of the insurance carriers have been quite enthusiastic.

Another frequent source of controversy and delay in handling injury cases is the inadequate handling of the subjective complaint problem. As subjective complaints must be considered from the standpoint of compensation if they limit the patient's ability to work, not only should they be described in detail, but the reporting physician should give his opinion of the validity of each complaint.

The rating of disability in cases of injury to an extremity is usually based on a comparison of the injured and uninjured sides. This should be expressed in terms of a fraction giving measurement of the injured over the uninjured. In case of bilateral disability the comparison is of course valueless and in such circumstances the examiner must estimate the normal. Failure to do this results in a delay in settlement.

Dr. Barritt is Medical Director of the Industrial Accident Commission.

The commission desires a very exact and detailed report of the disability. There is less interest in the patient's general physical condition, unless it has a bearing on the disability. The "Rules of Practice and Procedure" of the Industrial Accident Commission specify that medical reports should include the following: (a) History of injury. (b) The patient's complaints. (c) Source of all facts set forth in the history and complaints. (d) Findings on examination. (e) Opinion as to extent of disability and working ability. (f) Cause of disability. (g) Medical treatment indicated. (h) Likelihood of permanent disability. (i) If permanent disability exists, whether it is ready for rating and detailed factors on which a rating should be based. (j) The reasons for opinions.

Other than the foregoing, the commission has no exact requirements. The following outline based on the report form used in the commission's medical bureau, and sample forms indicating the routine measurements that are expected in an examination made for rating purposes, may be helpful as a guide.

REPORT OF EXAMINATION (OUTLINE)

- A. PART OF BODY EXAMINED (as, right major upper extremity).
- B. INJURY: A brief description of the original injury, operations, complications, etc.
- C. SUBJECTIVE COMPLAINTS:
 1. Description of subjective complaints. *Each* should be described in such a way that the commission will have a mental picture of how and how much, each complaint affects the patient's ability to work.
 2. Evaluation of subjective complaints. The examiner should give his opinion of the validity of *each* subjective complaint.
 3. A statement that there are no other subjective complaints.
- D. THE EXAMINATION (objective findings). *The technique for examining is best obtained from the book, "Evaluation of Industrial Disability."*

An exact detailed description of the disability should be given, including the following conditions:

 1. The exact level of bony amputation; condition of stump; tenderness, etc.
 2. Evidence of bony or fibrous union in fracture cases. Alignment, shortening, unstable joints, etc.
 3. Description of scars, deformities, etc.
 4. Need of prosthetic appliances.
 5. Muscle spasm. Muscle weakness.
 6. Vascular or sensory changes.
 7. Points of tenderness.
 8. Routine measurements (see sample forms herewith).
- E. SPECIAL REPORTS: Reports of x-ray and laboratory examinations on which an opinion is based should be quoted verbatim or the actual report attached.
- F. DISCUSSION AND OPINION: The following is an outline of the questions which should usually be answered. While some of these may seem superfluous, experience

has shown that in most cases, they will eventually have to be answered by someone. Complete information given in the report will obviate reexaminations and supplementary reports.

1. Is there disability as result of injury?
2. If so, is it:
 - (a) Temporary total?
 - (b) Temporary partial? (If so, give ability to work.)
 - (c) Permanent and stationary for rating purposes?
3. If permanent and stationary for rating, describe:
 - (a) Factors of disability resulting from the injury.
 - (b) Factors of disability, to which you believe, the injury was an aggravating or contributing cause.
 - (c) Controversial factors, if any, which you believe preexisted, and are unrelated to, and not aggravated by the injury.
4. Is any further treatment necessary to cure or relieve the effects of the injury? If so, describe.

SAMPLE FORMS FOR RECORDING ROUTINE MEASUREMENTS UPPER EXTREMITY

Shoulder atrophy	(Slight, moderate, severe)
Circumferences (inches)	Biceps _____/_____
	Forearm _____/_____
	Wrist _____/_____
	Hand _____/_____
Dynamometer tests* (state major and minor)	1 _____/_____
	2 _____/_____
	3 _____/_____
	(Inj./uninj.)
Motions of shoulder.....	Flex. _____/_____
	Ext. _____/_____
	Abd. _____/_____
	Add. _____/_____
	ER _____/_____
	IR _____/_____
Motions of elbow.....	Ext. _____/_____
	Flex. _____/_____
Motions of forearm.....	Pro. _____/_____
	Sup. _____/_____
Motions of wrist.....	DF _____/_____
	PF _____/_____
	RD _____/_____
	UD _____/_____

BACK

Motions of cervical spine:			
Ext. _____%	limited	Flex. _____%	limited
Rt. lat. _____%	limited	Left lat. _____%	limited
Rt. rot. _____%	limited	Left rot. _____%	limited
Motions of dorsal and lumbar spine:			
Forward bending:			
Finger tips miss floor (standing) _____		inches	
Finger tips miss toes (sitting) _____		inches	
Rt. lat. _____%	limited	Left lat. _____%	limited
Rt. rot. _____%	limited	Left rot. _____%	limited

*Dynamometer readings of injured and uninjured sides are expected in upper extremity examinations. If there is bilateral disability or if for any reason the examiner believes the dynamometer readings do not represent the actual loss, he should explain and in addition estimate the actual loss. If readings from more than one type of dynamometer are given, state the reading which you believe is most valid.

LOWER EXTREMITY

Length of lower extremity:

Um.—Int. mal. _____/_____inches
 Ant. SS—Int. mal. _____/_____inches
 Circ. (upper thigh) _____/_____inches
 Circ. (lower thigh) _____/_____inches
 Circ. knee (mid. pat.) _____/_____inches
 Circ. calf _____/_____inches
 Circ. ankle _____/_____inches
 Circ. bi. mal. _____/_____inches

Record:

Patellar reflexes
 Achilles reflexes
 Sciatic and post-tib. tenderness
 Hypesthesia, etc.
 Color and temperature

Motions of hip.....St. leg. _____/_____
 Th. flex. _____/_____
 Ext. _____/_____
 Abd. _____/_____
 Add. _____/_____
 ER _____/_____
 IR _____/_____
 Motions of knee.....Ext. _____/_____
 Flex. _____/_____
 Instability of knee.....AP Sl., mod., severe
 Lat. Sl., mod., severe
 Motions of ankle.....DF _____/_____
 PF _____/_____
 Inver. _____% limited
 Ever. _____% limited
 Motions of foot (mid. tar.)....._____% limited
 Motions of toes.....Ext. _____/_____
 Flex. _____/_____

NOTE: Circumferences in *inches*. Motion in *degrees* of ACTIVE motion. In bilateral disability give estimated normal. Record in form of fraction, inj./uninj., as Abd., 50/60.

MOTIONS OF HAND (Use of hand block optional)

	Prox. Joint	Middle Joint	Joint Distal	
Thumb..... <div> <div>Ext.</div> <div>Flex.</div> </div>		<div>X X X X</div> <div>X X X X</div> <div>X X X X</div>		Abd. _____/_____degrees. Add. Tip of thumb misses base of little finger _____inch.
				Tip of finger misses palm <div> <div>Prox.</div> <div>Mid.</div> <div>Distal</div> </div>
Index..... <div> <div>Ext.</div> <div>Flex.</div> </div>				
Middle..... <div> <div>Ext.</div> <div>Flex.</div> </div>				
Ring..... <div> <div>Ext.</div> <div>Flex.</div> </div>				
Little..... <div> <div>Ext.</div> <div>Flex.</div> </div>				

In bilateral disability always give estimated normal. Record circumferences in *inches* and motion in *degrees* of ACTIVE motion. Record findings in form of fraction, inj./uninj., as Abd. 165/180.
 965 Mission Street.

Origin and Treatment of Malignant Melanoma

JACK MATTHEWS FARRIS, M.D., Los Angeles

SIXTY-FIVE PER CENT of all malignant melanomas arise from moles which may have been present since birth.³⁶ As indicated by over-all salvage of 9.7 per cent of 595 patients followed for five years,²⁴ current methods of treatment are beset with shortcomings.

This presentation is illustrated by the clinical and pathologic features of 57 cases of malignant melanoma* observed between 1946 and 1951, of which 31 occurred in males and 26 in females. Table 1 illustrates the distribution of the cases by sex and age. Table 2 indicates the anatomic distribution of these 57 lesions, and emphasizes the frequency of occurrence in the lower extremities (21 cases), head and neck (17 cases), and trunk (13 cases). No area is exempt (Figure 1).

CLINICAL FEATURES

In over half of the cases, malignant melanoma arose from a preexisting mole which underwent a gross change apparent to the patient. The most frequent changes observed were increase in pigmentation and/or diameter, itching, eczematoid weeping, ulceration, bleeding, extension of satellite lesions into surrounding skin, and recurrence of the mole after the trauma of ineffective surgical treatment.

- *Studies in man and other animals indicate that tendency to development of malignant melanoma may be congenital. Dark-skinned races have a lower incidence than light-skinned races.*
- *Sixty-five per cent of all malignant melanomas arise from possibly congenital moles; in over half of the 57 cases included in this study the patient observed gross change in the pre-current lesion. Trauma, even a single blow, is often the cause of malignant change. Excision of all pigmented moles subject to trauma is urged as a means of reducing the incidence of this highly malignant lesion.*
- *Biopsy of suspected lesions, followed by excision of a wide area and adjoining lymph nodes if indicated, is the only adequate treatment. The removal of hirsute moles for cosmetic reasons is discussed.*

Trauma is a common cause of malignant change. In one instance a blow on the calf with a tennis racket apparently was sufficient to cause a mole (which had been present for at least forty years) to undergo malignant change with explosive violence. Thirty days after this incident there were satellite lesions and a solitary (microscopic) inguinal node metastasis.

Malignant melanomas metastasize widely—often to organs spared by cutaneous epithelial neoplasms.

TABLE 1.—Age and Sex of 57 Patients with Malignant Melanomas

Decade	Male	Female	Total
0-9	1	---	1
10-19	---	2	2
20-29	6	3	9
30-39	2	4	6
40-49	4	2	6
50-59	9	3	12
60-69	4	8	12
70-79	3	4	7
80-89	1	---	1
90-99	1	---	1
	31	26	57

Average age 50.7 years. Males—54.39%. Females—45.61%.

Presented before the Section on General Surgery at the 81st Annual Session of the California Medical Association, Los Angeles, April 27-30, 1952.

* The term *malignant melanoma*, as used in this presentation, is synonymous with *melanosarcoma*, *melanocarcinoma*, *nevocarcinoma*, *nevusarcoma* and *melanocapthelioma*. The term *nevus* refers to a benign dermatologic lesion in which there are definite *neval* cells infiltrating the corium in solid masses and cords. It is suggested that the term *melanoma*, as used in some institutions to designate a benign pigmented nevus, is confusing inasmuch as other observers consider the term to be synonymous with *malignant melanoma*.

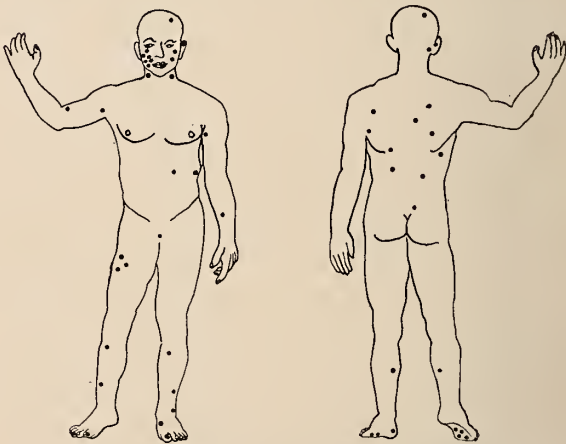


Figure 1.—Anatomic distribution of 57 malignant melanomas.

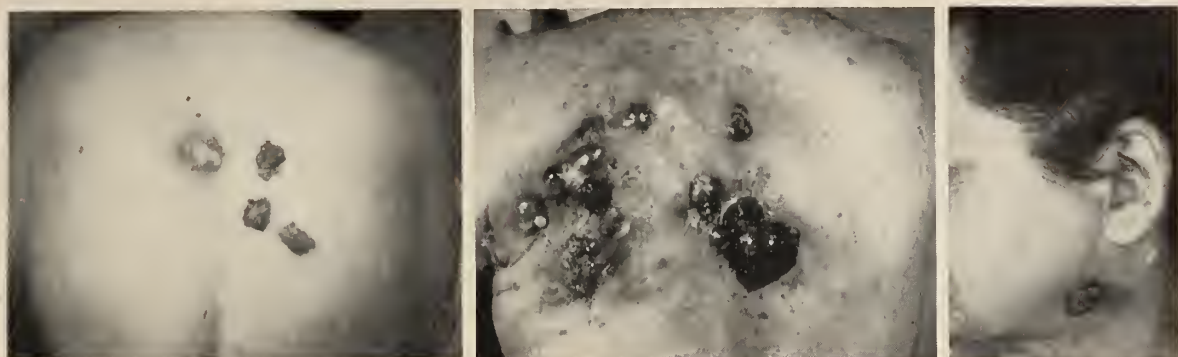


Figure 2.—*Left*, satellite lesions present for four and a half years following excision of a pigmented lesion. At the time of admittance there were gross hepatic enlargement and melanuria. *Center and right*, one year later (six years after excision of primary tumor) there were widespread metastases to the back, axillae and neck.

One patient with a primary neoplasm of the heel had melanotic invasions of the groin, skin, lymph nodes (generalized), stomach, liver, adrenal glands, kidneys, pancreas, lungs, small intestine, bone, pericardium and heart.

Recurrences develop in a great number of patients who survive five years. One patient had a primary lesion in 1914, recurrence in 1938⁴ and generalized melanosis in 1947—a 35-year history of melanoma. According to Wilbur and Hartman,³⁷ all patients with malignant melanoma of the eye die of generalized metastases if no other cause of death supervenes. One of the author's patients undergoing enucleation of the eye was well for over eight years and then died of widespread hepatic metastases.

Resection of far-advanced lesions and of disseminated lymph node involvement in certain instances may result in worthwhile salvage. Daland and Holmes⁷ reported on a patient with recurrent diffuse non-pigmented melanoma with inguinal node involvement who, after such resection, was well for six and a half years. A case observed by the author likewise illustrates this observation:

CASE 1: A white male aged 56 was admitted in January 1950 with multiple egg-sized soft masses in the right groin. An inconspicuous pigmented lesion on the lateral surface of the big toe had been cauterized with an "electric needle" three and one-half years before. There was no pathologic diagnosis. A single node in the groin was removed and found to be infiltrated with melanin; the microscopic diagnosis was malignant melanoma. Radical groin dissection was carried out with removal of 16 lymph nodes which were involved with malignancy. Twenty-seven months after opera-

tion and almost six years after cauterization of the primary tumor the patient was well and apparently free from disease.

The possibility of fairly long survival even without operation is indicated by the following case:

CASE 2: A 61-year-old woman reported that five years previously a pigmented lesion had been excised after recent growth. Six months after this operation three satellite lesions had appeared and grew slowly during the ensuing four and a half years (Figure 2). At the time of admission gross hepatic enlargement and melanuria* were observed. The situation was deemed hopeless and no treatment was instituted. One year later there were widespread metastases to the back, axillae and neck, but the patient appeared remarkably well. She died the next year, having lived a total of six years without any treatment after the original appearance of metastases.

Other observers have reported the occurrence of malignant melanoma in the male urethra (5 cases),²⁵ rectum (100 cases),⁶ meninges (43 cases) and biliary tract (11 cases)²¹ and suprarenal glands (1 case).^{13, 34}

The age of the patient is of great importance in malignant melanoma. One of the author's patients was nine years old when a malignant melanoma was removed from the plantar surface of the right foot. He is now 14 and has no evidence of disease. The literature is replete with accounts of the successful results of treatment of this malignant neoplasm in prepubertal patients. The presence of metastases to regional lymph nodes does not preclude successful surgical treatment in children. A malignant melanoma in a child aged eight³⁶ was removed from the left shoulder in 1932, followed by radical neck and axillary dissection three years later for proved metastases. At the age of 20 this patient was well and had no evidence of disease. Pack²³ reported 15 cases of malignant melanoma occurring in prepubertal children with 100 per cent indefinite survival. Whereas most malignant tumors are accelerated, this

* Melanuria may be detected by exposing the urine to air, where melanogen is oxidized to melanin. Kumer¹⁸ has reported the incidence as 28 per cent in cases of malignant melanoma. Melanuria occurs only in far-advanced cases and is an ominous prognostic sign.

TABLE 2.—Site of Primary Lesion in 57 Cases of Malignant Melanoma

Location	Male	Female	Total
Head and neck.....	10	7	17
Trunk.....	8	5	13
Upper extremity	1	4	5
Lower extremity	10	11	21
Unknown origin .....	....	1	1
	31	26	57

lesion is paradoxically retarded by the hormonal pattern of infancy and childhood. This peculiar variability must be attributed to a change in the endocrine activity of the ovary, testis, and adrenal and pituitary glands at puberty. Likewise, the endocrine activity at pregnancy undoubtedly results in pigmentation of the areola, the "mask of pregnancy," and the linea nigra. Why, then, the generalized melanotic pigment of the skin in the Addisonian state?—unless through a reciprocal stimulation of the pituitary gland by retarded adrenal activity.

These speculations by clinical investigators³⁰ have led to attempts at palliation through extirpation of the gonads but without success. Likewise, gonadectomy did not influence the action of the transplantable mouse malignant melanoma of Harding-Passey.

GENETIC FACTOR

Experimental studies and clinical observations point to a definite relationship between hereditary factors and the occurrence of malignant melanoma in animals. To a less convincing degree, there is evidence that similar genetic factors may be operative in humans. The possible relationship of cutaneous to ocular malignant melanomas has been of interest and a subject of debate among clinicians. Observations of certain hybrid fish indicate that the genetic basis for ocular melanoma in fish is completely independent of the hereditary factors for integumentary melanoma.^{14, 15} Sheremetieva and Brunst²⁸ reported recently the discovery, among their Mexican axolotls (salamanders), of a male and a female with infiltrating melanotic tumors on the sides of their bodies. Among the offspring of these subjects in three successive generations were a large number of specimens with malignant melanomas.⁵

Three cases of malignant melanoma of the skin in swine of the same breed and herd have been reported.⁵ In each instance the tumor occurred in the skin of the right flank. The three swine (two males and one female) had a common sire. The testicles of the males were removed, but they achieved the same growth and general development as the others of the herd. The female, which was not spayed, became debilitated and emaciated and at autopsy was found to have widespread visceral metastases, while the males had involvement of regional lymph nodes only, suggesting a beneficial effect of castration upon the growth and spread of the tumor.

The greatest incidence of malignant melanomas in animals occurs in horses,¹¹ most commonly on the skin of the anogenital area. A young white stallion with a melanoma of the anal region is known to have transmitted the neoplasm to all his white descendants but to none of those of a dark color.

Malignant melanoma of both the skin²² and the eye² occurs in dogs, also.

Similarly, the Negro race is less subject to the development of malignant melanoma than is the Caucasian race,¹⁷ although in both races the clinical course is identical. Melanomas, when they do develop in negroes, occur in areas of little pigment, such as the soles of the feet, the nail matrix (melanotic whitlow), oral cavity, anus and vulva. Anglo-Egyptian negroes are 100 times as susceptible to this tumor as American negroes,²⁰ presumably because of the constant trauma to the bare feet of the former.

Genetic factors undoubtedly exerted an influence on a family reported by Davenport.⁹ A woman aged 38 died (with generalized metastases) seven months after removal of a malignant melanoma of the eye. One daughter aged 19 had the left globe enucleated for an identical tumor and died five years later of metastases. A second daughter aged 39 died of metastases one year after removal of the left eye for malignant melanoma. In the two daughters of the latter patient malignant melanoma of the eye developed also. One of these died at the age of 34 from the disease; the right eye of the other was removed at the age of 19, and nine years later metastases appeared in the skin of the right arm, but this patient was still alive at the age of 30, with metastases.

There is a recent report⁴ of three cases of malignant melanoma of the skin in one family of five members. The reporting investigator points out that it can be calculated that the probability of one family of five members having three cases of malignant melanoma of the skin is 4.4 in one billion, a figure which statisticians regard as far outside the realm of chance.

Of questionable relationship is the report³⁵ of a newborn infant's succumbing to hepatic metastases of malignant melanoma. The mother died of generalized melanosis after delivery.

CYTOLOGIC FEATURES

Specimens from 57 cases were reviewed for this study.³⁸ In general, the neoplasms take one of two basic microscopic patterns. The first has a spindle or fusiform cell not unlike that of spindle cell sarcoma. The absence of pigment in certain specimens adds to the similarity. This type of lesion has been referred to as "melanosarcoma." The other type is a more densely staining tumor made up of solid masses of cells, sometimes resembling an atypical epidermoid carcinoma. There may be large vesicular nuclei, mitoses, hyperchromatism, pleomorphism, anaplasia and mononucleated or multinucleated giant cells. This type of lesion has been referred to as "melanocarcinoma." There is no correlation between histologic pattern and clinical activity.

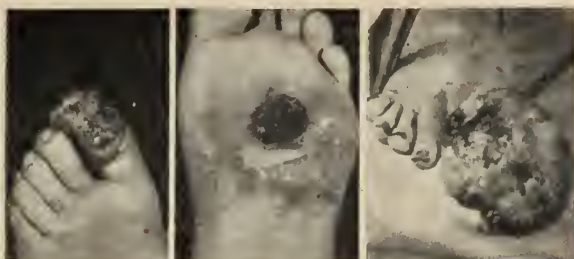


Figure 3.—Three cases of malignant melanoma of the feet. All these lesions arose in benign pigmented nevi. Prophylactic excision of the benign precursor is a means of averting this disaster.

There is no discernible correlation between pigment content of the tumor and degree of malignancy. An amelanotic primary tumor, for example, is capable of producing pigmented metastases. The ability of the tumor or the metastases to produce pigment does not support prognostic or clinical inference. Metastasis of melanin pigment to bone without accompanying tumor cells has been observed.²⁹

SURGICAL PRINCIPLES

Because of the large number and the location of them, not all moles can be removed from the general population. Which to remove is a problem. The education of the public in cancer prevention has resulted in an increased responsibility upon the physician who is consulted regarding the advisability of removing moles.

Certainly all moles on the feet should be removed, preferably before puberty. Nearly half of all malignant melanomas arise from benign precursors on the feet. There seems to be little question that the constant trauma of the shoe is an etiologic factor. Melanoma of the lower extremity appears to metastasize more rapidly and widely, and also possesses a less favorable prognosis. Who can deny that the routine physical examination often omits a careful scrutiny of the feet for the benign pigmented precursor of one of the most malignant of all tumors? What better opportunity presents itself to the physician to contribute significantly to cancer prevention? Figure 3 illustrates three cases of malignant melanoma arising in moles of the feet which had been present for many years. Two of the patients are now dead; one is living and has metastases.

Moles in which signs of activity are detected should be removed. An increase in pigmentation and/or diameter, itching, eczematoid weeping, ulceration, bleeding, extension into surrounding skin of a "sooty" pigmentation and recurrence after meddlesome and ineffectual surgical trauma are all indications for prompt and complete removal.

Moles that are subjected to repeated and irritating trauma should be removed. Pigmented lesions near

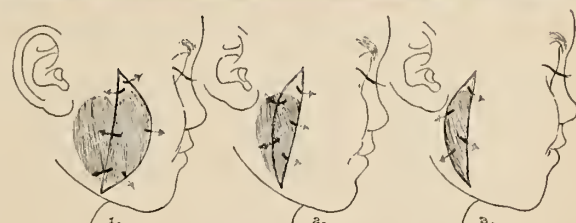


Figure 4.—Large nevus bearing heavy hair growth and deep pigmentation. This lesion was removed by stage excision in decrements of thirds.

the hair line, cheek (in the male), collar line, belt line, etc., should be excised.

The removal of certain other moles is desirable for cosmetic reasons. Figure 4 illustrates a peculiar variant of the nevus, the pilose type, distinguished by hairiness and deep pigmentation. Such hirsute tumors are present usually from birth, and there is rather general agreement that malignancy occurs rarely, but they present a considerable cosmetic and consequently psychologic problem to the young patients.

Excision and split-thickness graft give a cosmetically unsatisfactory result in most instances. A preferable alternative is staged excision in decrements of thirds, fourths or fifths, depending upon the size of the tumor. Intervals of three months between stages allow sufficient stretching of the skin so that primary closure may be accomplished. There need be no fear of inciting malignancy through operation on this lesion.³⁶

Every pigmented lesion is a potential malignant tumor and should be handled accordingly. Removal of a pigmented lesion on proper indication is a coup in the general program of cancer prevention. Sharp dissection should be done (Figure 5), with a generous border allowed, and the defect closed atraumatically with fine nonabsorbable suture material. All other methods of removal, and in particular electrocoagulation, should be condemned, as they give no assurance of complete removal and do not allow histologic diagnosis. The danger of inciting malignant melanoma by the injudicious use of the electric needle in treating nevi is well documented and should be familiar to all.^{1, 33} If upon histologic ex-

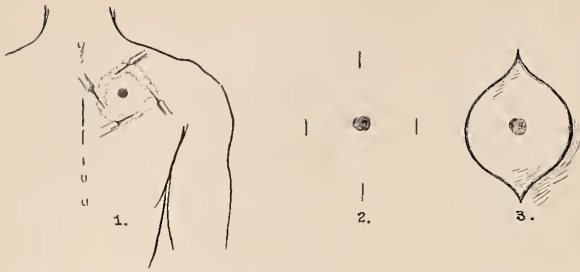


Figure 5.—“Biopsy excision.” Technique of excision of pigmented lesion, illustrating introduction of procaine hydrochloride without traversing the tumor and excision with a generous border by sharp dissection. This method does not traumatize the tumor and, more importantly, allows opportunity for careful histologic study. In the event that the lesion proves to be malignant, appropriate radical surgical treatment can be instituted.

amination a pigmented lesion proves to be a malignant melanoma, appropriate treatment should be carried out.

The diagnosis of malignant melanoma by means other than examination of tissue is fraught with hazard. The extensive and oftentimes mutilating procedures necessary for proper treatment should not be undertaken merely because of a “typical” gross appearance. It is virtually impossible to differentiate a pigmented basal cell carcinoma from a malignant melanoma by gross appearance (Figure 6). The former may be eradicated by either x-ray therapy or simple excision, whereas the latter requires wide excision and radical lymph gland dissection. Granuloma pyogenicum, an angiomatous skin tumor containing hemosiderin pigment, is well known to dermatologists as a mimic of malignant melanoma (Figure 6). Pigmented seborrheic keratosis may simulate generalized melanosis (Figure 6), and the blue-black mole of Tieche³² or so-called “blue nevus” rarely, if ever, becomes malignant.³⁶ There have been instances⁸ in which these blue nevi became sarcomatous, but the sarcomas were of such benign nature that excision prevented reappearance or metastasis.

In the author’s experience no harm can be attributed directly to biopsy properly carried out. The use of a general anesthetic has been recommended for removal of any mole,¹² but procaine hydrochloride can be introduced without traversing the tumor, by the general principles of regional anesthesia. After removing 760 pigmented nevi with local anesthesia (of which three proved to be malignant melanomas) in a five-year period, the author has not observed any bad results that can be attributed to the use of this anesthetic.

THE LOCAL LESION

If upon histologic examination a pigmented tumor proves to be malignant, appropriate definitive treat-



Figure 6.—*Top*, pigmented basal cell carcinoma. *Center*, granuloma pyogenicum. *Lower*, pigmented seborrheic keratosis.

ment is carried out. Often the primary tumor has already been excised with margins of 1 cm. or less as a “biopsy excision.” A block resection of this area, wherever feasible, is undertaken to include an area 10 cm. in all directions and also to include skin, subcutaneous tissues and deep fascia. When the lesion is in the thigh, upper arm or trunk, this block excision can be extended into the axilla or inguinal region “in continuity,” as first described by Handley¹⁶ and Pringle.²⁶ These principles, as outlined by Pringle, include (a) wide dissection of lymph channels around the lesion and up to the nearest lymphatic nodes; (b) reflection of the skin between the

lesion and the corresponding regional lymph nodes, and removal of the subcutaneous tissues and fascia with the nodes in one continuous strip.

Pringle reported in 1907 on two patients whom he treated by this method.²⁷ In 1937²⁸ he reported further upon their progress. One of these patients, a female, was treated for a lesion of the upper extremity with positive axillary node involvement, and was well and without disease 33 years later. Another, a male patient with a lesion of the lower extremity and positive inguinal node involvement, was well and with no evidence of malignant melanoma 30 years later. These are the only two patients with malignant melanoma whom Pringle treated in his entire surgical career.

The defect in the region of the primary tumor can be closed in rare cases without split thickness graft or a rotation pedicle flap when the principles, as outlined above, are followed. Obviously, these principles can be observed only in certain ideal locations. In the author's opinion, however, if the continuity principle cannot be observed, the inguinal or axillary dissection is accepted as routine in operations on the extremities. To delay the dissection two or three weeks for purpose of "filtration" has been recommended,³¹ but this may not be essential to the success of the principles of Handley and Pringle. Axillary dissection is accepted as a routine in operations for carcinoma of the breast, yet sometimes omitted in the treatment of malignant melanoma of the upper extremity. Likewise, many surgeons appear to be satisfied with local operations upon the lower extremity when groin dissection is essential to the definitive treatment. In certain other locations, regional node dissection may be withheld. A lesion near the midline on the trunk may metastasize to either axilla or groin. Obviously, the principle of continuity cannot be routinely applied in quadruplet. One patient³¹ with a lesion of the back developed metastases to both axillae and was subjected to bilateral axillary dissection. He later developed metastases to both groins and had bilateral groin dissections. In another patient a similar problem was encountered, but in addition there were metastases to the supraclavicular area, requiring a fifth regional node dissection.

Lesions of the fingers and of the toes, sole and heel of the foot are not amenable to wide block resection because of their proximity to tendon, periosteum and bone. Neoplasms of the fingers and toes may travel along the same channels as pyogenic infections. Involvement of any digit should always be treated by amputation of the digit, and in involvement of the foot amputation of the extremity at an optimum site with popliteal and inguinal node dissection should be seriously considered.

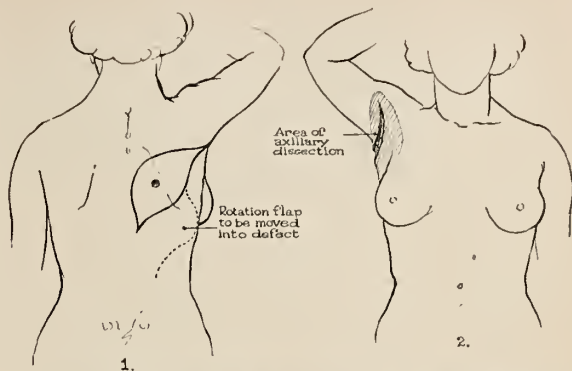


Figure 7.—Malignant melanoma of the back. Surgical principle of excision "in continuity" with concomitant axillary dissection. The patient was well five and a half years after excision of primary tumor.

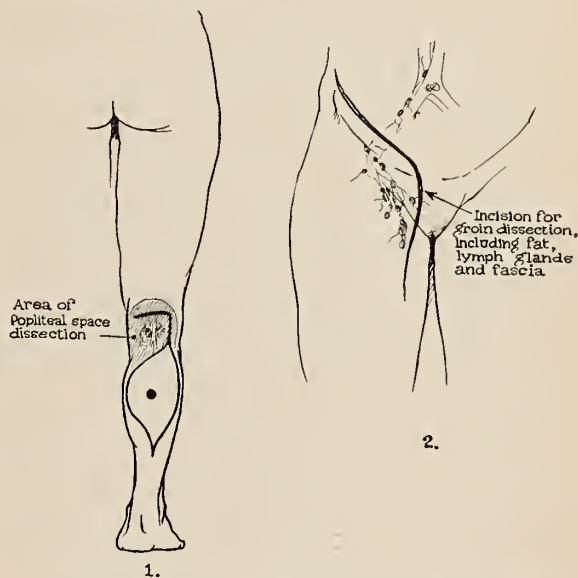


Figure 8.—Malignant melanoma of the calf. Surgical principle of excision "in continuity" with concomitant popliteal and radical groin dissection.

More formidable procedures—such as intrascapulothoracic amputation and hemipelvectomy— at present appear to be reserved for advanced lesions.^{3, 24} The ultimate value of these methods has yet to be ascertained definitely.

ILLUSTRATIVE CASES

Malignant melanoma of scapular area: Figure 7 illustrates the surgical principle of excision "in continuity" with regional lymph gland dissection in the case of a malignant melanoma of the back. A 10 cm. block of tissue was removed, including skin, subcutaneous tissues and deep fascia. This line of excision was carried through the axilla and an exenteration carried out as in radical mastectomy. The defect in the thoracic wall was supplied by rotation pedicle flap in the right flank. The axillary contents

were free of metastatic neoplasm, and the patient is now alive and well five and a half years after operation without signs of recurrence.

Malignant melanoma of calf: Figure 8 illustrates a malignant melanoma of the calf, in which a positive diagnosis was obtained by "biopsy excision." The patient was hospitalized and excision en bloc of the skin, subcutaneous tissues and fascia of the calf was carried out with extension "in continuity" to the popliteal space, followed immediately by complete groin dissection. It is of interest that the popliteal contents were free of metastatic neoplasm, but one of the nodes in the groin contained a solitary isolated metastasis.

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Wider Dissemination of Castor Bean Allergen

Factors Presaging Increasing Incidence of Disease in California

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ALLERGIC DISEASE caused by sensitivity to castor beans, previously reported as a burgeoning problem in Southern California owing to increased use of the pomace as fertilizer,⁵ appears likely to affect more and more persons now that the growing, transportation and processing of the beans is becoming more widespread and the chances for exposure to the allergen concomitantly extended.

Last year the author⁵ reported 11 cases of asthma or hay fever in city dwellers owing to sensitivity to castor beans. Vaughan⁶ in 1931, and Keeney⁴ more recently, noted specific reaction in farmers who used castor bean pomace as fertilizer. In 1928 Figley and Elrod² described allergic manifestations owing to dust emitted from a factory where oil was pressed from castor beans; and in 1950 Figley and Rawling³ and Coulson and co-workers¹ reported the presence of castor bean allergen in green coffee, probably as a result of shipment in the holds of vessels that contained castor bean dust from previous cargoes.

Considerable increases in production and processing of castor beans in this country in recent years have been induced by a policy of the U. S. Department of Agriculture. During the war years when the hazards of shipping made supply from abroad precarious, the department began a program to encourage production in this country by guaranteeing an attractive price for domestically grown beans and by other means. Now the need for castor oil in jet propelled planes has created additional demand.

In 1949 only 100 acres of California farmland was planted to castor beans. In 1950 the acreage was 9,000, and in 1951 it was 28,000. The 1951 harvest was about 20,000,000 pounds, or about half the beans processed in the state during that year.

Of the land planted to castor beans in 1951, some 19,500 acres was in the Imperial Valley, 7,000 in the San Joaquin Valley and 500 in Antelope Valley. Harvest-time (when allergic disease owing to castor bean dust is most likely to occur in agricultural workers) is October and November in the San Joaquin and Antelope valleys and December and January in Imperial Valley. The beans are transported

• With the growing, transportation and processing of castor beans in California rapidly increasing, it is probable that the incidence of allergic disease owing to sensitivity to the castor bean allergen also will increase.

by trucks to the nearest railroad and thence by box-car to the factories, two of which are located in Los Angeles and one in Contra Costa County.

In addition to the beans grown in California, about 20,000,000 pounds of them are imported annually at the ports of Los Angeles and San Francisco.

Although castor beans have been pressed commercially for oil in California since 1933, until recently almost all the beans processed were imported in ships. Now, with expanding domestic crops and increased handling of the beans by agricultural workers, railroad and trucking line employees, warehousemen, stevedores and workers in processing plants, there is likelihood of greater incidence of allergic disease among persons sensitive to castor bean allergen. (Cases have been reported of asthma caused by castor bean dust in persons who worked in railroad warehouses where the beans were stored.)

In addition, more pomace will be available for fertilizer, and persons who spread it and those who live near where it is used, in urban as well as rural areas, will be exposed to the allergen. A further probability is that since trucks, box-cars, ships and warehouses that have contained castor beans are difficult to decontaminate, other commodities subsequently transported or stored in such facilities also will carry some of the allergen.

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Presented before the Section on Allergy at the 81st Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1952.

Hemiarthroplasty of the Hip

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MANY OPERATIONS, such as drilling of the femoral neck, muscle transplantation, denervation of the hip joint and excision of the capsule, have been designed for relief of pain in the hip. However, the results have not been satisfactory. Arthrodesis of the hip joint will abolish pain but it entails long hospitalization and disability and puts an added strain on the back. Stinchfield and Carroll⁵ in a report on vitallium cup arthroplasty, stated that in no case was arthrodesis done nor did a patient wish to have it done owing to a poor result from arthroplasty. Methods employing acrylic replacement of the femoral head have so lately come into general use that results cannot yet be properly evaluated.

A method which it seems to the author has not been fully appreciated is hemiarthroplasty, a modification of the Smith-Petersen cup arthroplasty.³ As the term denotes, only half of the joint is involved in the operation. Gibson¹ in reporting upon study of approximately 100 cases in 1949, stated that he believed that most of the motion in the new joint takes place between the upper end of the femur and the cup rather than between the cup and the acetabulum. He further stated that it is inadvisable to ream out the acetabulum since this exposes softer bone to the pressure of the metal.

In 1923, Smith-Petersen⁴ noticed that smooth glistening membrane had formed over a piece of glass that was removed from a patient's back, and from this minor observation he developed the concept of mold arthroplasty. At first a glass cup was used. Because of frequent breakage, he changed to a plastic and then to a Pyrex cup. In 1937, upon a suggestion by a dentist, a vitallium cup was employed. In the Smith-Petersen operation both sides of the hip joint, the femoral head and the acetabulum, are reshaped. In hemiarthroplasty the femoral head alone is reformed to fit the vitallium cup.

This operation is indicated for cases in which the disease is localized for the most part in the femoral head as in osteochondritis dissecans, aseptic necrosis, osteoarthritis, and traumatic arthritis subsequent to traumatic dislocation of the hip, subchondral fracture of the femoral head, congenital dislocation and Legg-Perthes disease or slipped femoral epiphysis. The advantages are that the procedure takes less time and causes less operative trauma, the

• Hemiarthroplasty of the hip is a simplification of the Smith-Petersen cup arthroplasty in which half of the joint or femoral head is reshaped to fit the vitallium cup. This procedure shortens hospitalization to 10 to 14 days and has been successful in the relief of hip pain and in increasing hip motions. It is indicated when the disease is localized for the most part to the femoral head.

period of hospitalization is shorter, there is earlier return of hip motion, ambulation and weight-bearing are possible sooner after operation, there is less postoperative pain, and the function of the joint after healing is greater.

In carrying out the operation the hip is exposed by the anterior Smith-Petersen approach³ or by posterolateral incision,² and is dislocated. The articular cartilage of the head is removed with an osteotome and the head reshaped with a reamer. It is important to excise enough bone to cause good bleeding. Occasionally small cysts in the femoral head are present. They are packed with cancellous bone. A vitallium cup is then placed over the femoral head. Then the hip is reduced and the motions tested. The cup must not be snug in the acetabulum or on the femoral head. Osteophytes if present are removed from the acetabular rim, but the acetabulum is not reshaped.

After operation, Russell traction of three to five pounds is applied for 10 to 14 days. Quadriceps exercises are started on the third day. The patient may be up on crutches as early as the tenth postoperative day. Partial weight-bearing is started in four to six weeks with full function in two to three months. Gluteal and quadriceps exercises should be started early and persistently continued.

Hemiarthroplasty was done in 11 cases. Excellent results were obtained in three patients with osteochondritis dissecans, in one with aseptic necrosis, and in four with traumatic arthritis following traumatic dislocation. Two patients with osteoarthritis or malum coxae senilis were operated upon, one with a good and one a fair result. In the latter instance infection developed after operation and later subsided. That was the only operative complication in the series. In one case of Gaucher's disease, the result was poor owing to progression of the disease.

Presented before the Section on Industrial Medicine and Surgery at the 81st Annual Session of the California Medical Association, Los Angeles, April 27-30, 1952.



Figure 1 (Case 1).—*Upper*, bilateral osteochondritis dissecans. Both femoral heads are flattened and the articular surfaces irregular. *Lower*, after bilateral hemiarthroplasty using vitallium cups.

CASE REPORTS

CASE 1: A 46-year-old radio technician had pain in both hips so severe that walking was extremely difficult. Six years previously pain had begun in the right hip, apparently without trauma. It had become progressively worse and after about six months the left hip also became painful. Results of laboratory studies were within normal limits, and except for limitation of motion in the hips no abnormalities were noted in physical examination. In x-ray films of the pelvis (Figure 1) flattening of the femoral heads and narrowing of the joints was noted. A diagnosis of bilateral osteochondritis dissecans was made. Left hemiarthroplasty was done. The patient was in Russell traction for 14 days, after which he was up on crutches. He was discharged from the hospital on the 16th postoperative day. Partial weight-bearing was started at six weeks, and the patient returned to work at an airplane factory. Using a cane, he walked with full weight-bearing ten weeks after the operation.

Six and a half months later the right hip was operated upon in the manner described (Figure 1). The pathological report was osteochondritis dissecans. The postoperative course was uncomplicated. Six weeks after operation the patient began partial weight-bearing and at ten weeks full weight-bearing. Thereafter the patient worked regularly.

Before the operations there was pronounced limitation of hip motions, especially in flexion and internal rotation (Table



Figure 2 (Case 2).—*Left*, aseptic necrosis of the left femoral head with destruction of the superior and lateral surfaces. *Right*, after hemiarthroplasty.

1). Permanent flexion deformity of 25 degrees was present on both sides. Five years later the patient had essentially normal flexion, increased rotation and no permanent flexion deformities. He could climb in and out of airplanes, go up ladders, row a boat, ride a bicycle, run and bowl. He had some stiffness and pain at first, but this gradually disappeared.

CASE 2: A 43-year-old mechanic fell on January 1, 1944, incurring an intertrochanteric fracture of the left femur which was treated by traction with excellent healing. After the injury the patient complained of increasing pain, stiffness and limp in the left hip. The past history was not remarkable except for brucellosis in 1943 and recurrent fever of unknown cause in May 1948 and again in December 1949. No abnormalities were observed in a general physical examination. Results of studies of the blood and of serum agglutination tests were within normal limits. Flattening of the left femoral head with irregularity and necrosis was noted in x-ray films (Figure 2). The acetabulum appeared intact. A diagnosis of aseptic necrosis of the femoral head was made.

Left hemiarthroplasty was done (Figure 2). The postoperative course was uneventful except for a reaction to penicillin. Four and a half months after the operation the patient returned to work doing spot welding on air transports and thereafter continued working five to six days a week, nine hours a day.

The hip motions before and after operation are shown in Table 2. Rotation and abduction were considerably increased. The patient complained of some stiffness and occasional pain in the left hip but at last report they were becoming less severe. He limped slightly but walked without a cane or crutch. The left leg was one-fourth inch shorter than the right.

TABLE 1.—*Hip Motions Before and After Operation (Case 1).*

	Before Operation		Five Years After Operation	
	R	L	R	L
St. leg raising.....	65°	80°	90°	90°
Flexion	100	100	120	120
Ext. rotation.....	20	10	30	30
Int. rotation	0	10	5	10
Perm. flexion	25	25	0	0
Circ. thigh.....	18½"	19½"	18"	18"
Leg length	34¾	34¾	34¼	34¼

TABLE 2.—Hip Motions Before and After Operation (Case 2).

	Before Operation		Two Years After Operation	
	R	L	R	L
St. leg raising.....	70°	70°	85°	85°
Flexion	120	110	120	125
Ext. rotation.....	40	25	50	40
Int. rotation.....	20	5	25	25
Abduction	30	0	30	12
Circ. thighs.....	17"	15"	17½"	16½"
Leg length	39¼	39¼	39½	39¼

TABLE 3.—Hip Motions Before and After Operation (Case 3).

	Before Operation February 1951		After Operation April 1952	
	R	L	R	L
St. leg raising.....	90°	85°	90°	80°
Flexion	110	130	110	125
Ext. rotation.....	22	45	40	40
Int. rotation.....	5	25	10	20
Perm. flexion	10	5	10	5
Circ. thighs.....	17½"	19"	17¼"	19"
Leg length	34½	34½	34¾	35

CASE 3: In 1939 a 45-year-old structural steel worker fell 65 feet, fracturing the fifth lumbar vertebra, the right hip, pelvis, right knee and both feet.

The patient was examined in 1951 because of complaint of constant pain and stiffness of the right hip and pain in the right knee and in the lower part of the back.

Upon physical examination it was observed that the patient walked with the right hip externally rotated and limped to the right. When the hip was moved a grating noise was audible. The hip motions were limited.

Pronounced deformity of the head of the right femur, with flattening and bony spurs, was noted in x-ray films (Figure 3). The joint space appeared narrowed and irregular. A diagnosis of traumatic arthritis of the hip was made.

Hemiarthroplasty of the hip was done, using the Gibson approach. Partial weight-bearing was permitted in four weeks. The patient returned to work four and a half weeks



Figure 3 (Case 3).—*Left*, traumatic arthritis of the right hip following fracture dislocation. There is a large bony spur on the inferior margin of the head. *Right*, after hemiarthroplasty.

after operation, and at the end of three months he went deer hunting. He has continued working regularly, doing the climbing required of a structural steel worker. Table 3 shows hip motions before and after operation.

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Annular Pancreas

Peptic Ulcer as Late Postoperative Sequela

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ANNULAR PANCREAS has become established in recent years as a clinical entity. Since a report by the authors in 1946, nine additional reports,^{1,4,5,8,14,21,22,23,24} have been published about the clinical manifestations and the surgical correction of this anomalous condition. In this presentation another case treated by operation is reported, as also the late sequela of peptic ulcer which developed in this and a previously reported case. To avoid this complication, not anticipated when the previous report was published, a more radical operation is suggested.

There is no report of a large series of cases of this rare condition, but a review of collected reports brings out two facts—first, that gastric or duodenal ulcer may coincide with annular pancreas (Table 1, cases 12, 17, 25) and second, that gastric and duodenal retention may remain after resection of the pancreatic ring (Table 1, cases 7, 10, 13, 18, 27). Other associated anomalies were frequently encountered (Table 1, Cases 1, 16, 20), and pathologic conditions such as gastric ulcer and pancreatitis, to mention just two, were often the reason for surgical exploration in which the annular pancreas was discovered. In the authors' first case an acutely inflamed appendix overlying the pancreatic ring aggravated the obstruction. In the second, the finding of an obstruction in the second portion of the duodenum identical in location to that in the first case

• *Two cases of annular pancreas with late postoperative sequelae of duodenal and gastric ulcer are presented. In each case operation was limited to the annulus. Because symptoms are not permanently relieved by this procedure and subsequent peptic ulceration is not prevented, it is suggested that partial gastric resection be performed and decompression of the duodenal stump be effected by resection of the pancreatic ring.*

led to correct preoperative diagnosis. Lehman and Archer¹⁸ based preoperative diagnosis on similar findings.

CASE REPORTS

CASE 1: A 33-year-old priest underwent resection of the pancreatic annulus in February 1945. He made an uneventful recovery and was clinically improved for five years. In preoperative roentgen studies an obstruction in the second part of the duodenum with retention for six hours and 24 hours had been observed (Figure 1). Postoperative roentgenograms indicated persistent duodenal obstruction (Figure 2). Epigastric distress reappeared about five years later and the patient was treated conservatively without relief. Roentgen studies on March 6, 1951, showed persistent partial duodenal obstruction with pronounced dilation of the duodenum. A defect along the lesser curvature suggested ulceration (Figure 3). Barium left the duodenum slowly. At the end of six hours the stomach was empty, but the duodenum remained filled with barium. The symptoms and roentgen findings are those of duodenal ulcer and incomplete duodenal obstruction.

Presented before the Section on General Surgery at the 81st Annual Session of the California Medical Association, Los Angeles, April 27-30, 1952.



Figure 1.—*Left*, anteroposterior film (Case 1) showing definite constriction of the second portion of the duodenum with dilation of the first portion. *Center*, six-hour examination showing definite residue in stomach and duodenum. *Right*, twenty-four hour examination showing residue in first portion of the duodenum.

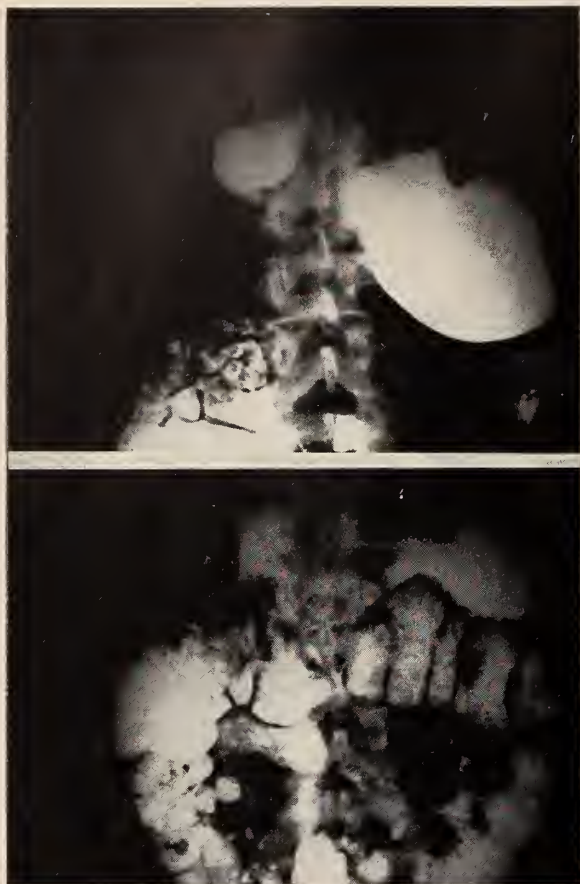


Figure 2.—Upper, postoperative six-hour examination showing residue in stomach and duodenum. Lower, postoperative 24-hour examination showing gastric and duodenal residue.

CASE 2: A 54-year-old housewife entered the hospital in October 1949 with the following complaints:

Vomiting for the previous two years which began abruptly one evening when the patient suddenly became distressed after dinner and belched large amounts of gas. Since then she had vomited every third or fourth night between midnight and 3 a.m. During the day she felt perfectly well and never vomited. The vomitus was very foul.

Diarrhea simultaneous in onset with vomiting. The patient passed five or six stools on the first evening of illness, and frequent loose stools and much flatus were an almost daily occurrence.

Gaseous distention was ever present and very distressing.

Despite these symptoms the appetite remained good. There was no acute pain, hematemesis or melena, and in the six weeks preceding hospitalization, with the patient under conservative treatment, the body weight had increased ten pounds. A high-protein diet had relieved the diarrhea but the vomiting persisted.

On physical examination on entry the patient was observed to be well developed, well nourished, and in no acute distress. Blood pressure, temperature and pulse were within normal limits. The heart and lungs were normal to auscultation. The abdomen appeared essentially normal, with no masses, rigidity or tenderness.

Roentgenograms of the gastrointestinal tract in July 1949 had shown the stomach to be large and dilated and containing old residue. On fluoroscopy no irritability of

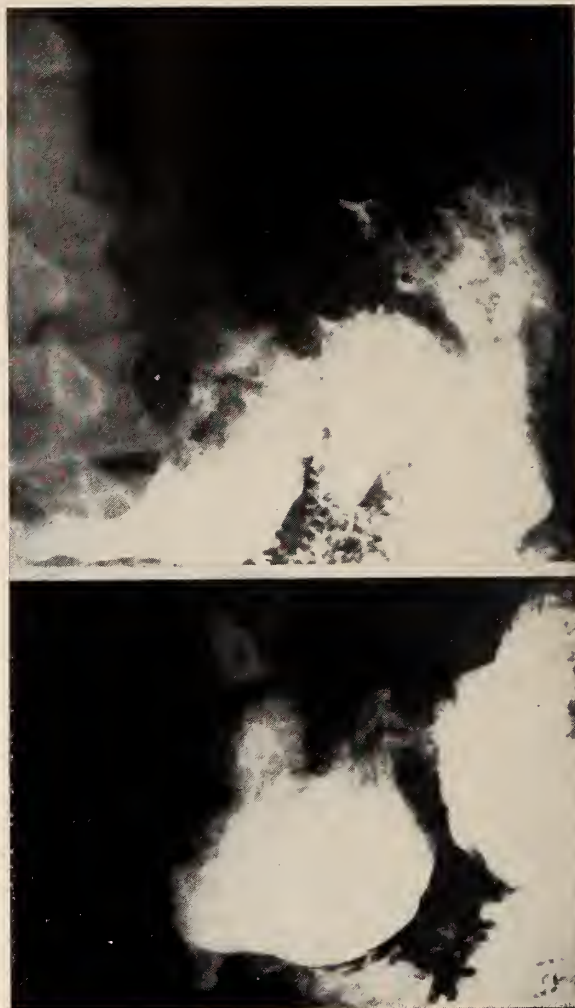


Figure 3.—Upper, ulcer crater of duodenum (Case 1). Duodenal retention still present. Lower, ulcer niche in duodenum.

the duodenal cap and no evidence of ulceration was observed. On the films the descending portion of the duodenum appeared elongated and there were signs of extrinsic pressure along the anterior wall (Figure 4). There was a 90 per cent residue in the stomach and duodenum at the end of six hours and slightly less at the end of twenty-four hours. A diagnosis of duodenal obstruction probably owing to annular pancreas was made and surgical exploration was advised.

Operation was performed under general anesthesia on October 11, 1949. An upper right rectus incision was made and the duodenum exposed. A firm band about 0.5 cm. in diameter was found extending from the posterior abdominal wall to the right of the duodenum to the anterior duodenal surface, there fusing with a triangular structure of tissue (identified as pancreatic) extending from the medial or left aspect of the duodenum. This pancreatic ring encircled the duodenum almost completely. Above it the diameter of the duodenum was about twice the normal; below, about half the normal. The pylorus was greatly dilated and thinned. On the anterior duodenal wall distal to the pylorus there was evidence of slight scarring, but no induration could be felt. The gallbladder was thickened but no stones were palpable and it was emptied easily. The common duct

TABLE 1.—Data on 27 Cases of Annular Pancreas Treated by Operation

Case	Reported by	Age-Sex	Operation	Result	Remarks
1.	Vidal 1905	Male 3 days	Posterior gastroenterostomy	Cure	Also congenital atresia of duodenum
2.	dos Santos 1906	Female 26 yr.	Posterior gastroenterostomy	Died (pneumonia)	Diagnosis at autopsy
3.	Lerat 1908	Female 46 yr.	Resection of pancreatic ring	Cure	Drainage ceased on 13th day
4.	Smetana (Case 3) 1928	Male 74 yr.	Posterior gastroenterostomy	Died (several hours after operation)	Diagnosis at autopsy
5.	Howard 1930	Female 46 yr.	Division of ring	Cure (pancreatic fistula)	Second operation for drainage
6.	Brines 1930	Male 35 yr.	Drainage	Died (1¾ hours after operation)	Diagnosis at autopsy
7.	Zech 1931	Female 27 yr.	Division of ring; Heineke-Mikulicz on duodenum	Cure (2 yr.) complicated by small pancreatic fistula	Duodenum did not expand after division of ring
8.	Brines 1931	Male 44 yr.	Posterior gastroenterostomy	Died (respiratory infection)	Diagnosis at autopsy
9.	Truelsen 1940	Male 35 yr.	Posterior gastroenterostomy; duodenal plastic	Cure	Postoperative x-ray: functioning gastroenterostomy
10.	Lehman 1942	Male 23 yr.	Partial resection of ring	Recovery but persistent symptoms	Postoperative x-ray: persistent duodenal deformity
11.	Gross & Chrisholm 1944	Female 3 days	Duodenojejunostomy	Cured	.....
12.	Custer & Waugh 1944	Male 74 yr.	Gastric resection with gastrojejunostomy	Cure	Also benign gastric ulcer
13.	Goldyne & Carlson 1946	Male 26 yr.	Partial resection of ring	Cure	Postoperative x-ray: persistent gastric and duodenal residue; late duodenal ulcer
14.	Brown, Bingham & Cronk, 1948	Female 53 yr.	Division of ring; duodenotomy; retrograde exploration of common bile duct	Died	Subdiaphragmatic abscess, duodenal fistula; posterior gastroenterostomy done on 22nd post-operative day
15.	Burger & Aldrich 1949	Female 4 days	Partial resection of ring; Heineke-Mikulicz on duodenum	Died	.....
16.	Ohlmacher & Marshall, 1950	Male 27 yr.	Partial gastrectomy with gastrojejunostomy	Cure	Partial absence of pylorus
17.	Baker & Wilhelm 1950	Male 59 yr.	Partial gastrectomy with gastrojejunostomy and duodenojejunostomy	Cure	Also benign gastric ulcer
18.	Ravitch & Woods 1950	Male 57 yr.	Partial resection of ring; duodenojejunostomy 37 days later	Cured	Postoperative local pancreatitis resulting in obstructing scar formation
19.	Ravitch & Woods 1950	Female 3 days	Duodenojejunostomy	Cured	.....
20.	Ravitch & Woods 1950	Male 8 days	Gastroduodenostomy	Cured	Malrotation of intestine; complete duodenal atresia of portal vein anterior to duodenum
21.	Archer, reported by Haden, 1950	Male 3½ yr.	Partial resection of ring	Recovered	Persistence of partial duodenal obstruction
22.	Conroy & Woelfel 1951	Male 30 yr.	Division of ring	Cured	.....
23.	Grotjan, 1939, reported by Conroy & Woelfel, 1951	Female 26 yr.	Gastroenterostomy	Cured	.....
24.	Payne 1951	Male 33 yr.	Partial resection of ring	Recovered	Persistence of duodenal obstruction
25.	Cattell 1951	Male Adult	Division of ring; subtotal gastrectomy	Cured	Concomitant duodenal ulcer; post-operative jejunal fistula; Roux exclusion and resection of fistula
26.	Silvis 1951	Male 37 yr.	Partial resection of ring	Cured	Pancreatic fistula
27.	Goldyne & Carlson 1952	Female 54 yr.	Resection of band and reflection of pancreatic ring	Recovered	Persistence of duodenal obstruction and massive gastric hemorrhage two years after operation

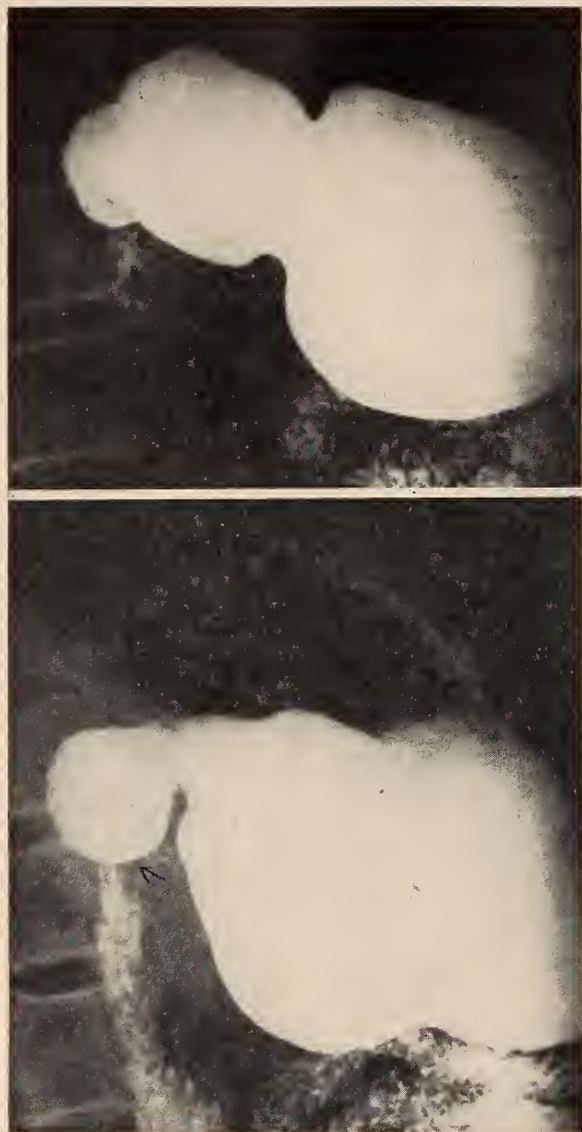


Figure 4.—*Upper*, elongated descending duodenum with evidence of extrinsic pressure along the anterior wall (Case 2). *Lower*, same view at 24-hour examination.

felt normal. No abnormality was observed in the pancreas. The pancreatic band was intimately fixed to the duodenal wall. The band was resected and the aberrant pancreatic tissue dissected free from the anterior duodenal wall, reflected mesially and fixed to the anterior aspect of the pancreatic head with a silk suture. The constricted area of the duodenum was dilated with the index finger through the intact duodenal wall. The abdomen was then closed in layers without drainage.

Convalescence was rapid and uneventful. Vomiting ceased and the patient ate well without distress. The patient left the hospital on the seventh day in excellent condition. Two months later, although she said she felt well, she had diarrhea lasting eight days. Under the management of an internist this condition improved. When the patient was observed again ten weeks after operation she had gained fifteen pounds.

Two years later it was learned that the patient had had recent severe gastric hemorrhage accompanied by vomiting

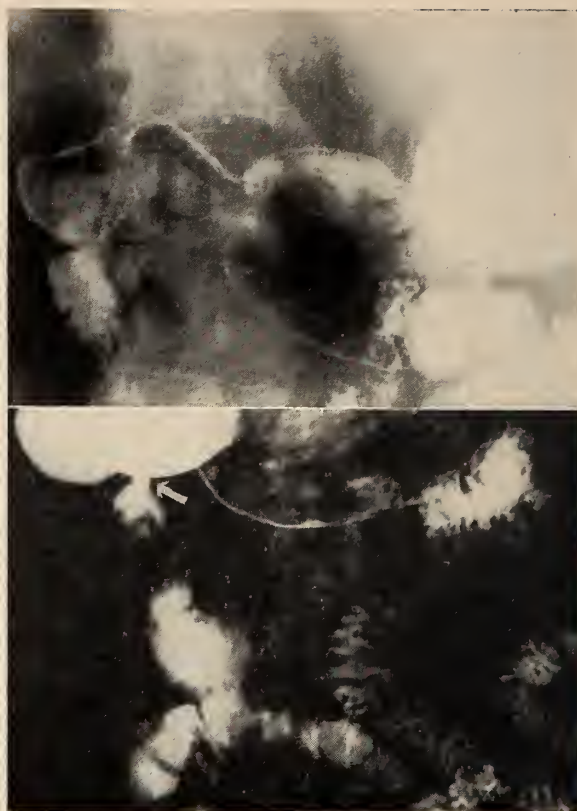


Figure 5 (Case 2).—*Upper*, lateral deviation of duodenal cap. Note contracture of the lateral border of the proximal segment of the second portion of the duodenum. *Lower*, pronounced constriction in second portion of the duodenum.

and necessitating two transfusions. For the first eighteen months following operation she had been in good health with no digestive complaints. Then began a period of belching and considerable flatulence. For the next six months the appetite varied from poor to good. The patient had no severe pain but felt distressed and distended and sometimes eructated foul gas as before operation. Diarrhea also recurred intermittently, lasting for a month at a time followed by normal stools for four to six weeks. The patient's weight, however, was 168 pounds, five pounds more than before operation, and she felt strong.

Roentgenograms made shortly after the hemorrhage in September 1951 and repeated on October 30, 1951, showed lateral deviation of the duodenal cap, contracture at the lateral border of the proximal segment of the second portion of the duodenum, constriction in that area, and puddling in the second portion of the duodenum (Figure 5). There was no evidence of active ulceration.

EMBRYOLOGY

The pancreas arises from dorsal and ventral buds of that portion of primitive gut which will later become the duodenum. The buds lie in the dorsal and ventral mesenteries which are present at that stage of development. Normally the ventral mesentery regresses, permitting the ventral pancreatic bud to accompany the rotating gut and become the inferior portion of the pancreatic head. When the ventral mesentery remains, the pancreatic bud is fixed in

TABLE 2.—Results of Various Operations on Patients with Annular Pancreas

Operation	No. of Cases	Results		
		Cured	Living, Not Cured	Died
Resection—Pancreatic ring	9	....	8 (Persistent deformity in 6 cases; pancreatic drainage in 2 cases)	1 (Patient also had duodenal plastic operation)
Partial gastrectomy with gastrojejunostomy....	4	4	.....	.....
Posterior gastroenterostomy	6	3	.....	3 (Upper respiratory infection in 2 cases; cause not reported in other case)
Simple division of ring.....	4	3 (2 had fistula)	.....	1 (Subdiaphragmatic abscess; fistula)
Duodenojejunostomy	2	2	.....	.....
Gastroduodenostomy	1	1	.....	.....
Drainage for pancreatitis.....	1	1	.....	.....

the ventral position and does not follow the rotation of the bowel in toto but elongates and becomes a ring about the now rotated duodenum.^{2, 7, 9, 15, 19}

PATHOLOGY AND PATHOGENESIS

Obstruction by the annular pancreas causes duodenal dilation above the ring, greater constriction causing greater dilation. Gastric or duodenal ulcers^{1, 10, 22} or other pathologic conditions^{12, 17, 21, 25} are associated in some cases. Provocative questions must be answered in any explanation of the clinical manifestations on the basis of the known congenital anomaly.

Since the condition is congenital and the duodenal dilatation and obstruction presumably have been present for years, why do the clinical symptoms appear so late? (Only five cases have been found in very young infants;^{5, 13, 23, 28} the average age of patients operated upon was 41.6 years.) Why do gastric or duodenal ulcers occur concomitantly or as late postoperative sequelae in a number of cases?^{1, 6, 10, 12, 22} With release of the obstructing ring why does the defect remain, and why do ulcers occur even though not present preoperatively?

These questions can be answered on a hypothetical basis. The muscular layers of the serosa accommodate to anomalous structures if the anomalies do not too greatly interfere with normal functions. In annular pancreas, the dilation of duodenum and later the stomach prevents pyloric sphincteric action and thus permits regurgitant alkaline substances to enter the stomach from the duodenum. It is at this stage that clinical symptoms become manifest. Because of the pronounced dilation of the duodenum and stomach, thinning of the walls and compression of the intramural vessels, necrosis begins in minute areas. Extension of this necrosis and stasis of the gastric or duodenal contents lead to the development of an ulcer.

It would seem that upon relief of the obstruction by resection of the annulus normal anatomic relationships would be reestablished and normal phy-

siologic activity ensue. However, that is not the fact.^{12, 14, 17, 22, 23, 29} Dilation and symptoms of obstruction continue and ulcerations develop. It may be conjectured that prolonged duodenal constriction would cause atrophy of the underlying wall. This atrophy would be aggravated by the pull of the dilated bowel above the constriction. The constricted tract would become anoxic and later fibrotic; hence the bowel even when liberated by operation could not dilate sufficiently to relieve the obstruction.

CLINICAL FEATURES

Although the preoperative diagnosis is difficult, it can be made if annular pancreas is remembered as a cause of chronic duodenal obstruction. Especially should this diagnosis be considered when the nutritional state of the patient does not reflect the severity of the obstruction as seen on x-ray films. (Figure 8 illustrates why in Case 2 the patient had foul gassy eructations accompanying vomiting after being in a recumbent position but did not vomit during the day when erect. (If other anomalies are incidentally found in the presence of duodenal obstruction with pronounced gastric dilation, the cause of the obstruction may be presumed to be annular pancreas.

TREATMENT

The operative procedure reported by the authors in 1946 was resection of the pancreatic annulus with dilatation of the constriction in the duodenum. Since then 13 additional cases in which operation was done have been reported, making a total of 27 including the authors' second case.

In nine of the cases (Table 2) the pancreatic ring was resected (Table 1, cases 3, 10, 13, 15, 18, 21, 24, 26, 27). One patient, a four-day-old girl, died (Case 15). A Heineke-Mikulicz plastic operation had been done on the duodenum in addition to resection of the ring. In five of the remaining cases duodenal deformity and retention still were present after operation.

In five cases (5, 7, 14, 22, 25) the pancreatic ring was divided. In two of these (cases 5, 7) pancreatic

fistulae developed, necessitating a secondary operation for drainage in one case (5). In another (case 25) the patient had jejunal fistula after gastric resection in addition to division of the ring. In case 14⁴ duodenotomy and retrograde exploration of the common bile duct were done in conjunction with section of the ring; subdiaphragmatic abscess and duodenal fistula developed, and the patient died after posterior gastroenterostomy on the twenty-second postoperative day. One patient (case 22) was said to be cured.

It would appear from the foregoing summary that opening of the duodenum in conjunction with resection or section of the pancreatic ring is extremely hazardous. Persistence of the duodenal deformity and of the obstruction after resection of the ring alone is also strikingly emphasized.

Of the cases in which operation did not include correction of the pancreatic annulus, gastric resection was done in four (cases 12, 16, 17, 25). In three of them (cases 12, 17, 25), gastric or duodenal ulcer was present before operation. Cure resulted in all three. Posterior gastroenterostomy without resection of the ring was done on six patients; three (cases 1, 9, 23) were cured and three died (cases 2, 4, 8). Cause of death was not reported in one case; in two others, occurring before the days of antibiotics, death was due to upper respiratory tract infection.

The present opinion of the authors is that expressed by Lehman in discussing the report of Payne:²² Since gastric and duodenal ulceration may be associated with annular pancreas (cases 12, 17, 25) or may develop as a late postoperative complication in cases where the pancreatic ring alone is resected, partial gastric resection as well as resection of the pancreatic ring should be done if the patient's condition permits.

The question of whether it is necessary to resect the annulus is not yet answered. The possibility of postoperative formation of a fistula (cases 3, 5, 7, 14, 25, 26) must be weighed against the possibility of duodenal stump leakage, which may be more likely if the constricting pancreatic ring is not resected. Also to be considered is the possibility of pancreatitis developing if the annulus is left intact.

Chronic pancreatitis has occurred in a great proportion of the reported cases, and Brines² has reported a case of acute hemorrhagic pancreatitis in which annular pancreas was a factor. Lehman¹⁸ noted chronic interstitial pancreatitis in five of the first ten cases treated by operation in which microscopic studies were done. Only future trial can determine whether a short-circuiting operation without resection of the ring will prevent pancreatitis.

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Management of Patients with Ureteral Stone

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URETERAL STONE presents two problems to the physician. The first is the removal of the stone; the second, not always solved, is the prevention of further stone formation.

For the relief of pain, a physician's first duty in an acute attack, the author uses Demerol® or morphine sulfate administered subcutaneously, or, if the pain is unusually severe or of exhausting duration, intravenously. A prescription is left for a tablet to be taken if the pain recurs, and it is made clear that further hypodermic injections may be necessary if the pain becomes severe or the patient is vomiting. The author has found aspirin with codeine, Dilaudid®, Demerol or morphine satisfactory for oral use. If excruciating pain continues, particularly if accompanied by vomiting, hospitalization is advisable for administration of fluids and narcotics.

Although such symptomatic treatment must sometimes precede diagnosis of this condition when the onset is sudden and painful, a typical attack of "ureteral colic" makes correct diagnosis reasonably sure. Agonizing pain in the loin with radiation to the lower abdomen, groin or genitalia usually signals the passage of a stone into the ureter. Accompanying vomiting and shock are due to intense pain. If there is frequent urination or constant desire to void, the stone is probably in the lower end of the ureter. It must be remembered, however, that other conditions may cause or mimic ureteral colic, such as the pain of herpes zoster involving the twelfth thoracic or first lumbar nerve, certain types of hydronephrosis with recurrent transient obstruction, and the passage of blood clots down the ureter from renal bleeding.

Acute appendicitis sometimes resembles ureteral colic, even causing tenderness in the flank and the appearance of a few erythrocytes and leukocytes in the urine. The reverse may also occur: Stone in the ureter may be taken for appendicitis if there is no radiation of pain or frequency of urination and if the presence of a few erythrocytes in the urine is attributed to local ureteral irritation from acute inflammation of the appendix. Appendectomy, although probably not harmful in such circumstances, will of course be ineffective. As the presence or absence of stone can be readily proved by an intra-

• Immediate steps in the treatment of ureteral stone, beginning with the often acute onset, are relief of pain, urinalysis (including Gram stain), forcing fluids, examination of urine for the stone and urography at the earliest feasible time. If the stone causes continual pain or appears unlikely to be passed safely, it should be removed—with a cystoscope if possible; if not, by operation which may be done while the patient is still under anesthesia.

To combat further stone formation a large fluid intake should be maintained, the extracted stone analyzed, an acid ash diet prescribed, serum calcium and phosphorus measured, urinary stasis corrected and urinary infection and distant foci of infection cured. Vitamin A, aluminum gels and particularly hyaluronidase appear promising as preventives to stone formation.

venous urogram (see Figure 1) without delaying operation for more than a half hour, this examination should be made in every patient suspected of having appendicitis if symptoms are atypical or if there is tenderness in the flank and the urine contains erythrocytes, even though pain and even muscle spasm are present in the right lower quadrant of the abdomen. Even if there is reflex ileus with gaseous distention, as often occurs in ureteral stone, the excretion of dye or failure of excretion from each kidney is usually visible in the urogram. When the calculus itself is not visible, or is masked by intestinal shadows or the bony structures of the pelvis, its presence may be deduced if function on the affected side is delayed or absent, or eventually from dilation of the pelvis and calyces and of the ureter above the calculus. In acute appendicitis the dye is usually excreted promptly by each kidney, and it is nearly always possible to demonstrate the absence of ureteral distention or obstruction sufficiently clearly to rule out the diagnosis of stone.

It must be remembered that ureteral stone is not always painful, and that even a large stone may cause only slight symptoms. For example: A young woman who had recurrent fever, chills and pyuria was thought to have recurrent pyelonephritis, but the symptoms were due to a stone, 1.4x1.8 cm., in a ureterocele into which a double ureter drained

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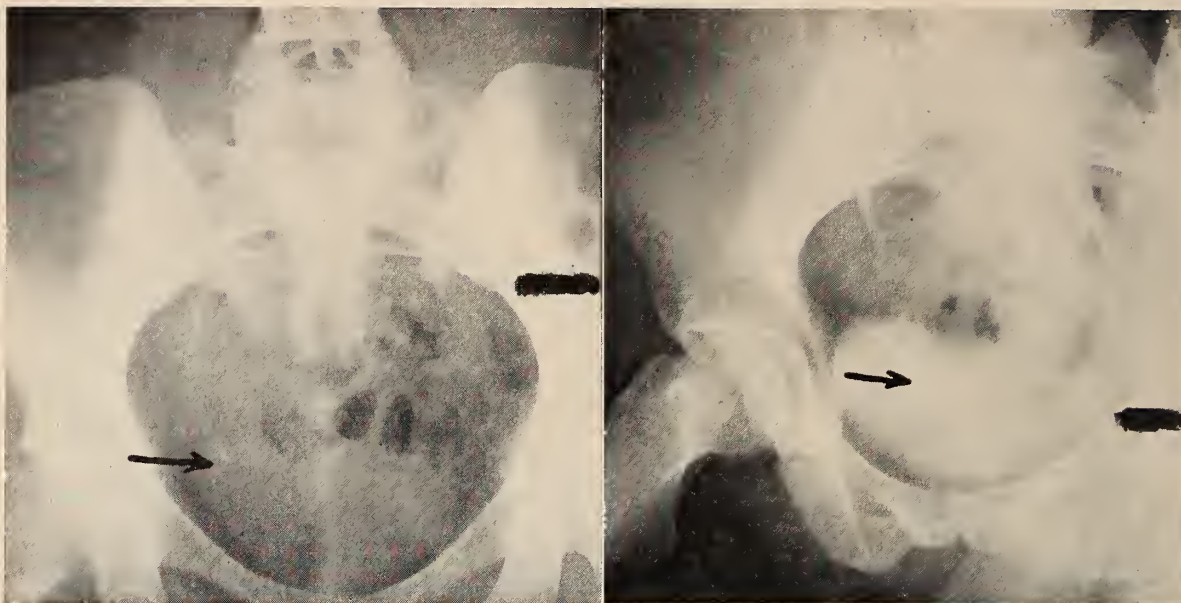


Figure 1.—Urograms show ureterovesical junction obstructed by stone which might be mistaken for phlebolith if both antero-posterior and oblique films did not indicate it to be in the course of the ureter.

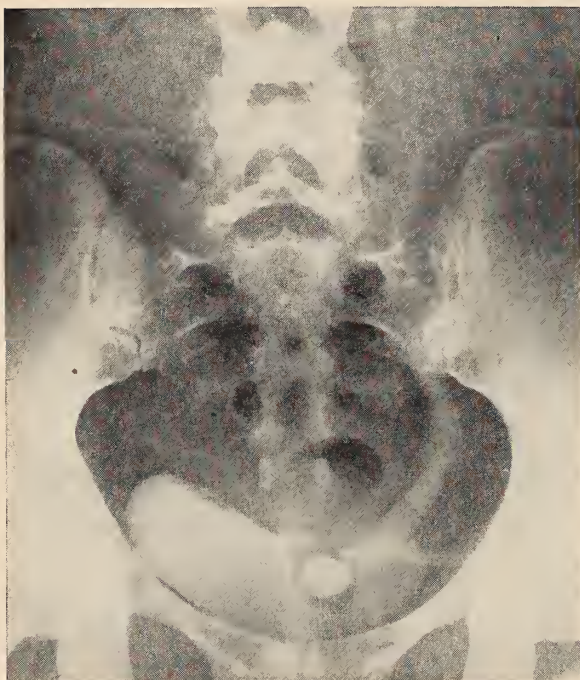


Figure 2.—Large calculus in ureteroceles, partially obstructing branched left ureter. In this case there was infection but no pain.

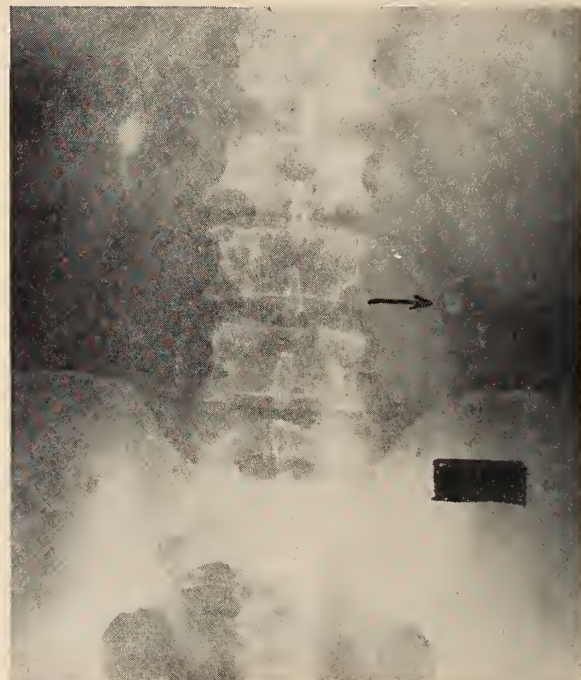


Figure 3.—Film taken in 1946 showing calculus in left ureter opposite lower border of third lumbar vertebral body, with no function in left kidney demonstrable by intravenous urography. In 1951 this patient had another stone in the left ureter. Neither calculus caused pain but there was gross hematuria.

(Figure 2). A man had intermittent pain in the left flank for three or four years prior to discovery of a stone in the upper left ureter; no function could be demonstrated in the left kidney (Figure 3). Five years after the removal of this stone, another, which in the interim had been observed to form in the lower pole of the left kidney, passed into the ureter

but caused only transient, painless hematuria. Operation was necessary for removal of each of these stones; the renal function then was excellent. In another man who had no pain, recurrent frequency with pus and erythrocytes in the urine led to the

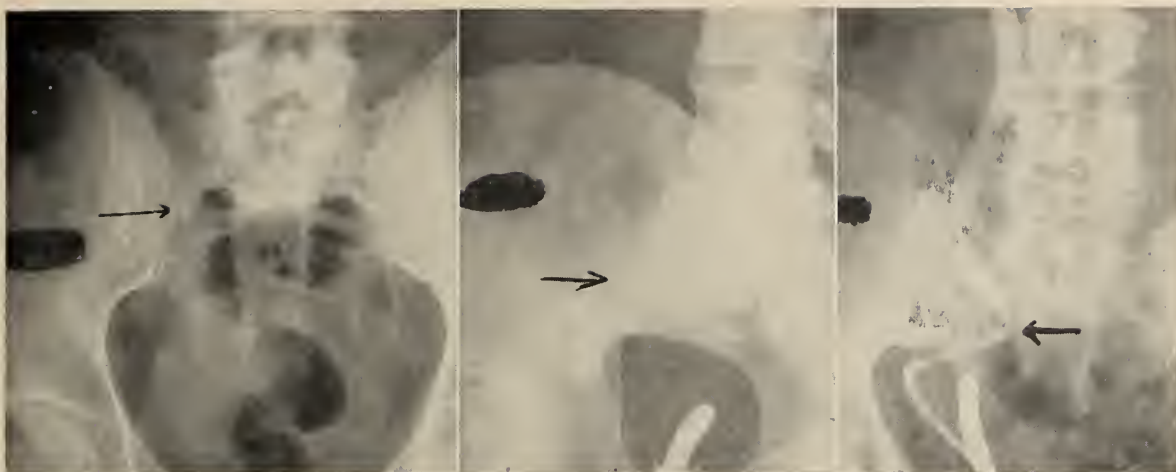


Figure 4.—Calculus in right ureter causing painless hematuria. *Left*, stone barely visible in front of sacrum. No function in right kidney by intravenous urography. *Center*, right semilateral film with tip of catheter just below calculus. *Right*, right ureter partially filled with dye, showing typical dilation above stone which is at point of angulation.

detection of a stone in the right ureter, in front of the sacrum (Figure 4). There was also very poor function in the right kidney, but an oblique film with the tip of a ureteral catheter in contact with the stone, and a ureterogram to show the dilation above, were necessary for the diagnosis of impacted stone requiring open operation.

Five to eight per cent of all stones are composed of uric acid or of cystine (neither of which casts a shadow in a roentgenogram) and therefore cannot be observed unless secondary calcium salts are also present or a negative shadow is produced against a contrasting medium. Sometimes, therefore, the diagnosis must be made from the combination of symptoms, urinalysis, and roentgenographic evidence of obstruction to the ureter.

In some cases the stone may be too small to be visible; it may be obscured by bowel or bone structures, but in that case it usually can be visualized in an oblique film. If the presence or possibility of phlebolith confuses the findings, a catheter should be inserted in the ureter to the point of obstruction and films taken in two planes.

Spontaneous passage of ureteral stone occurs in about 75 per cent of all cases. Sometimes, therefore, if pain does not recur, both patient and physician take it for granted that the stone has been passed and do not investigate further. This omission is a serious mistake. To prevent both the possibility of damage to the kidney from a "silent" stone in the ureter and the formation of other stones, further study is necessary. This should be emphasized to the patient while the impression of the attack is fresh in his mind and the desire to avoid further attacks is at its height.

If chills and fever indicate the presence of infection, immediate hospitalization is necessary to protect the kidney from serious or irreparable damage

either from pyonephrosis or from multiple abscess formation and pyemia. Because of these serious consequences the author makes it a rule to take a sample of urine (by catheter from female patients) on the first visit. The finding of erythrocytes in this specimen helps to confirm the diagnosis of stone, while infection is indicated by the finding of leukocytes or bacteria in a Gram stained specimen.

Fluids are forced with any patient having ureteral stone, and the patient is instructed to void into a container so that the stone may be recovered as evidence that it has been passed and so that it may be analyzed.

As soon as possible after some degree of tolerance to the stone is acquired, or after the patient is hospitalized, an intravenous urogram should be made to gain some idea of the size and location of the stone and to learn of associated urological conditions of importance.

If unremitting pain continues when the patient is not under the influence of medication, or if the stone does not progress down the ureter in a reasonable time, cystoscopy should be considered. If there is no sign of either obstruction or infection of the kidney and serious pain does not persist, the patient may be permitted to carry on his usual activities for several days or even weeks while awaiting passage of the stone, provided the progress of the stone is followed by means of roentgenograms and urinalyses. For example, Figure 5 shows a 6 mm. calculus in the middle third of the left ureter which by roentgenography was observed to descend slowly in the ureter and was finally passed with practically no further attacks of pain. Stones already in the lower end of the ureter arc, of course, more likely to be passed, but progress of any stone may cease and repeated attacks of pain and obstruction may

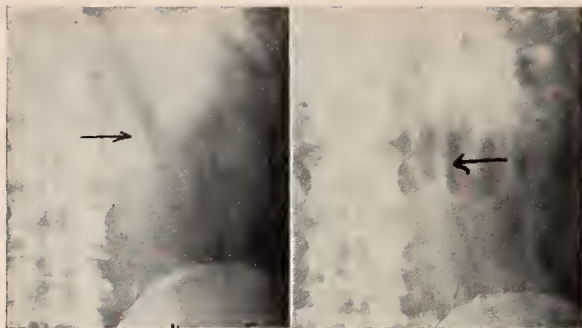


Figure 5.—*Left*, a 6 mm. calculus in left ureter opposite third lumbar vertebral body noted on preliminary film of abdomen. *Right*, intravenous urogram showing point of obstruction by stone. This stone passed spontaneously without further pain and without manipulation of any kind.

make cystoscopic instrumentation or operation necessary. Obstruction must be relieved lest renal function be permanently damaged; and if infection occurs, urinary drainage is urgently needed.

Cystoscopic measures consist in the passage of one or more catheters to relieve obstruction, particularly where infection is present, or in attempts to remove the stone by traction on a looped catheter or basket. Of the various designs of basket the author prefers the Johnson basket with a filiform guide as the easiest to push past the stone, although success in removing the stone or relieving the obstruction is never certain with any instrument or manipulation. Rarely, the ureter is perforated or ruptured by such manipulation. This occurred in a man with a non-opaque stone. When a ureterogram showed extravasation of dye, operation was done to obtain the stone and drain the retroperitoneal space. Impaction high in the ureter, even of a small stone, may be an indication for operation since even if instruments can be passed the stone may be so rough that considerable morbidity will follow its extraction. Figure 6 shows a rather small calculus, causing pronounced hydronephrosis. In this case removal was attempted first with a Johnson basket and then with a looped catheter. Neither could be made to pass by the stone or to engage it, although a small ureteral catheter was at last introduced into the renal pelvis. Operation was done while the patient was still under anesthesia, to avoid prolonged hospitalization and possible added morbidity as a result of further delay in removing the stone. As repeated manipulation is dangerous in the presence of infection, if a catheter cannot be pushed past the stone for proper drainage, operation is indicated as an emergency measure. If the stone is larger than 5 or 6 mm. in diameter, it is less likely to be passed spontaneously even if there is no infection, and the sooner it is extracted cystoscopically or removed by operation the better for the integrity of the urinary tract. In

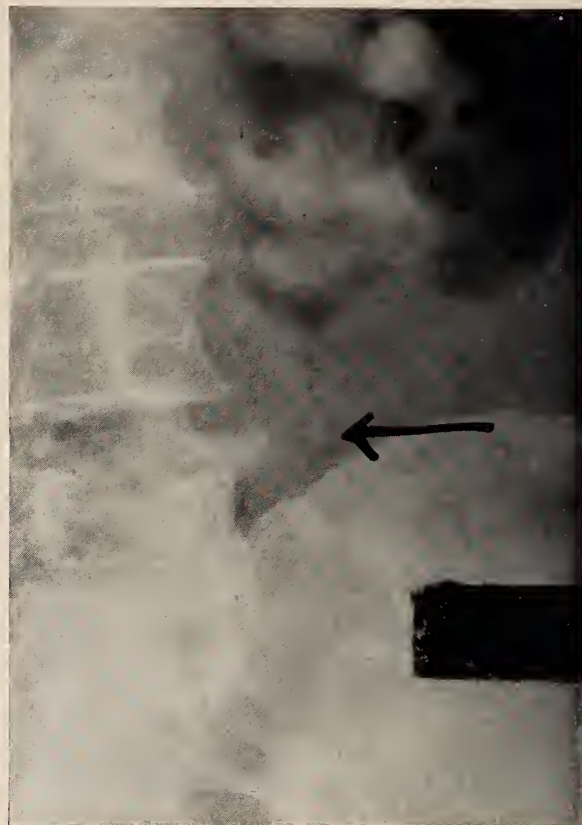


Figure 6.—*Left* semilateral intravenous urogram. Small calculus visible anterior to fifth lumbar vertebral body, with rather pronounced hydronephrosis. The calculus was removed by ureterolithotomy.

cases in which the patient has only one ureter, it is mandatory to remove ureteral stone immediately, for obstruction usually results in anuria and uremia in a short time regardless of infection.

After the stone has been passed or removed, the following measures are taken to prevent further stone formation: (1) forcing fluids; (2) analysis of stone; (3) acid ash or basic diet; (4) determinations of calcium and phosphorus in the serum; (5) correction of urinary stasis; (6) correction of urinary infection; (7) elimination of foci of infection; (8) administration of vitamin A, aluminum gels and hyaluronidase.

Analysis of the stone will sometimes help more than any other single factor in determining a diet to avoid stone formation. Uric acid or cystine stones are best prevented by a low purine basic diet, and in the case of uric acid stones the addition of salicylates in dosages up to 5 or 6 grams daily may even aid in the dissolution of other calculi already present (Figure 7). However, since such stones occur in only about eight per cent of patients, the alkaline ash diet is usually contraindicated. In most cases the stone is either calcium oxalate or phosphatic with or without oxalate. Therefore an acid ash

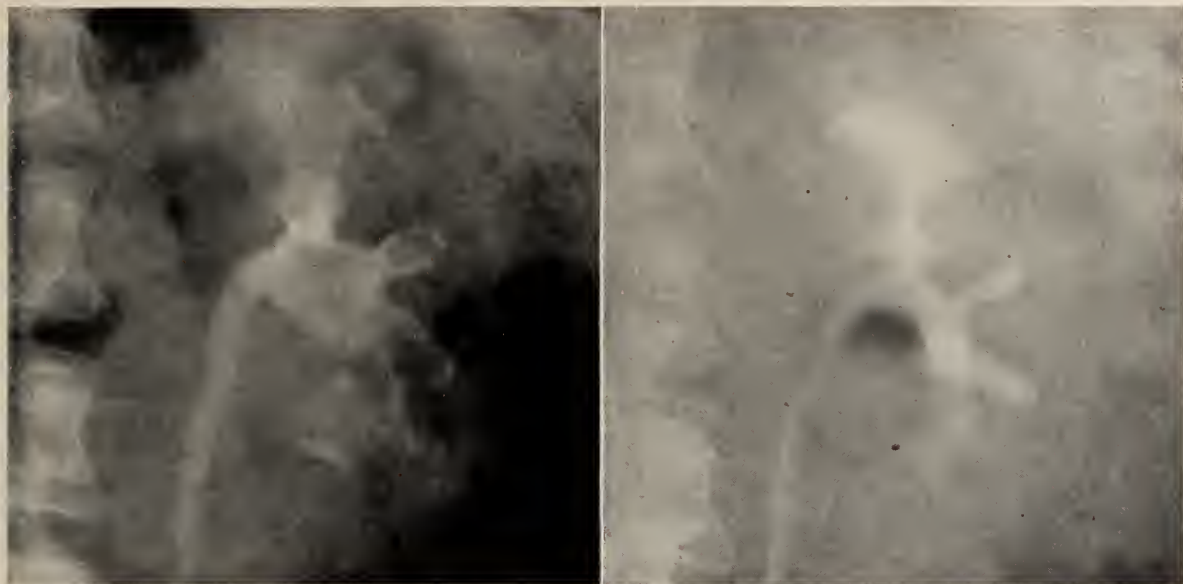


Figure 7.—*Left*, retrograde pyelogram, left kidney, showing radiolucency interpreted as uric acid stone, non-opaque, surrounded by dye and filling pelvis and calyces. *Right*, pyelogram after three years of basic ash diet with salicylates. Except for small portion in lower minor calyx, calculus apparently no longer present.

diet usually is advisable. This is easier to maintain if there is no infection, and with the elimination of such foods as chocolate and certain vegetables which are high in oxalates the acidified urine holds calcium salts in solution better than a neutral or basic urine. The author believes that a high fluid intake, particularly of water, is of greater importance than any diet, and that precipitation of calcium salts is decreased both by the dilution of the urine and by more rapid passage through the urinary tract. If a glass of water is taken each of the usual 16 waking hours of the day, the total intake is a gallon; this quantity must be increased in desert climates. As a part of the diet 50,000 units of Vitamin A is given daily, because of the evidence obtained by animal experimentation that when there is a deficiency of this vitamin hyperkeratinization of the epithelium of the urinary tract occurs—a condition making deposition of calcium salts on the affected areas more likely. Over-acidification must be avoided, particularly when urea-splitting organisms are present, for in this condition calcium excretion is increased, and thus the purpose of making calcium salts more soluble in the urine is defeated.

Obstructive lesions predisposing to stasis and infection should have been discovered in the original diagnostic studies of the urinary tract, and these should of course be corrected at the most opportune time. The problem of infection is by no means solved with the newer antibiotics, and it may be extremely difficult to eliminate such resistant organisms as *Proteus vulgaris*, *Pseudomonas aeruginosa* and even of *Aerobacter aerogenes*. Prostatitis in

males and urethral stenosis in females should be looked for and corrected if found. Other foci such as dental infections, tonsillitis and sinusitis should be considered and eliminated if possible.

As a small proportion of patients with ureteral stone have hyperparathyroidism, calcium and phosphorus determinations should be made for each patient and repeated for those with a history of recurrent calculus. Calcium excretion studies should be made with high and low calcium diets if the serologic findings are suspicious.

Shorr advocated the use of aluminum gels to precipitate phosphates in the gastrointestinal tract, combined with a low phosphate diet to prevent the formation of phosphatic stones. Shorr and Carter³ reported that with rather rigid diet plus the use of Amphojel[®] or, preferably, Basaljel,[®] they reduced the recurrence of phosphate stone. However, Vermeulen and associates⁴ had disappointing results in attempting to reduce phosphate excretion in man by the use of Basaljel without the rigid diet of Shorr. One of the disadvantages of the program is the expense of aluminum gel medication over a period of months and years, owing to the relatively high dosage required (160 cc. daily) and the necessity for repeated quantitative studies of urinary phosphate excretion.

The recent work of Butt¹ and co-workers on the colloid constituents of the urine has brought out the possibility of greatly increasing the colloid components of the urine which increase the solubility of the urinary salts to such an extent that prevention of stone in patients who have repeatedly had stones

now seems much more feasible. Butt found that the administration of hyaluronidase so increased the colloid substances in the urine that deposition of calcium salts on urinary drainage tubing was eliminated and that many patients remained free of stone formation. A recent communication stated that the dosage of this material had been increased to as much as 300 turbidity-reducing units mixed with 1 cc. of saline solution injected subcutaneously every 24 to 48 hours, with greater effectiveness in severe cases of renal calcinosis. There is no simple test as yet to determine the dose of hyaluronidase. It should be given at least in 50 to 150 turbidity-reducing units every two or three days, the frequency depending somewhat on the turbidity of the urine when this factor can be observed to be due solely to urinary mineral content and not to pyuria. In light of the frequency of injection, the patient or one of the family should be trained in the use of a hypodermic syringe. It is to be hoped that a drug that will accomplish the same result when taken orally will be found and that a simple test for more efficient determination of dosage will soon be available.

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Discussion by MILO ELLIK, M.D., Long Beach

Dr. LeDuc's concept of this problem invites little disagreement and his outline for getting rid of the stone and keeping the patient from having another is commendable. The accomplishment of these two, however, is not always so simple, and the record shows that we have done far better with stone removal than we have with stone preven-

tion. Fortunately about half of those who suffer from a common calculus at some time are not likely to have another, but those who do, need help and careful supervision; a few are in a desperate situation.

At the risk of seeming peremptory, but with only a sincere desire to promote further discussion, I should like to select certain bits of this essay for random comment. Dr. LeDuc couldn't possibly have listed all conditions entering into differential diagnosis and I should like to add two I have recently had to deal with. One was ruptured aneurysm of the lower aorta and the other acute thrombosis of the renal artery. These conditions rarely could be confused with ureteral stone, but it might be well to keep them in mind when radiological proof is not forthcoming.

In addition to the analgesics favored by the author, it might be worth while to mention that Banthine® has had some recent commendation and that Depropanex® in fairly large doses has been used with success.

Dr. LeDuc undoubtedly advises the use of a small tea strainer for the socially acceptable patient who might wish to use a filling station rest room. Rinsed and dried well it may be carried in the vest pocket or even in an extra carrying case, as is done by one of my fastidious female patients.

With regard to the Johnson stone basket, there seem to be two or more schools of thought. Some of us feel that it is potentially too dangerous to be a favored instrument. The filiform extension Dr. LeDuc mentions should facilitate the introduction of this rather formidable metal stone extractor and should not increase the hazards of the device. The looped catheter, in my opinion, is a safer, more reliable retriever for stones. Avoidance of forceful extraction of any kind is defensible but the procedure appears well established, and we should remember that a lot of good things are somewhat risky. I can't resist asking whether or not anyone is using a teleprobe or perhaps the older wax bulbs in demonstrating non-opaque stones these days.

To date the record in stone prevention is not brilliant. My professor said that urinary stasis and infection were the outstanding causes of stone and he still appears to be right. Remove these and you serve the patient well. Beyond this, Dr. LeDuc has mentioned the other preventives. I have never been enthusiastic about the acid-ash diet or Vitamin A. Basaljel may have merit—at least it is within financial reach, is palatable, and spoon-fed. If hyaluronidase proves comparably as effective as insulin, it will be worth while. I haven't used it. I have not yet observed a case of parathyroid tumor in a person in whom stones form, but I still make calcium-phosphorus tests.

Perhaps some time someone will put a sort of Basaljel or hyaluronidase into the nation's breakfast food. If he does, he should remember that there are a lot of people who just won't eat it.

CASE REPORTS

- An Unusual Tumor of the Mediastinum—Thyroid Cyst
- Gastrointestinal Hemorrhage Associated with Meckel's Diverticulum
- Coccidioidomycosis of the Epididymis
- Two Cases of Fatal Pancytopenia Following Mesantoin Therapy

An Unusual Tumor of the Mediastinum—Thyroid Cyst

GEORGE A. WOOD, M.D., and
SIDNEY P. MITCHELL, M.D., Palo Alto

BENIGN TUMORS of the mediastinum are not uncommon. All large series of case studies report a striking preponderance for benign tumors, and a minority, usually about 10 per cent, for malignant tumors. The malignant or benign nature of a mediastinal tumor cannot definitely be established without thoracotomy. Watchful waiting, which is still too often practiced, is sometimes intolerable for the welfare of the patient especially when asphyxiation is imminent, as in the case reported herein. In such instances, emergency thoracotomy for the mediastinal tumor is imperative.

The following report of a case of simple thyroid cyst of the mediastinum is illustrative. We have found no similar tumor reported in the literature.

CASE REPORT

A 52-year-old robust, white male was admitted to the Palo Alto Hospital because of increasing cough and wheezing for four days. He had had a "chest cold" for one week and it had culminated in increasing dyspnea, productive cough, daily fever, tightness across the chest, and obviously increasing cyanosis. The dyspnea had assumed the proportions of air hunger.

Each winter for the preceding few years the patient had had bouts of asthmatic bronchitis that lasted for several weeks. Except for an appendectomy in 1920 he had had no operations.

At the time of physical examination upon admittance, the oral temperature was 100° F. The radial pulse was 96 beats per minute and was regular. Respirations were 22 per minute. There was cyanosis of the skin, especially of the head and neck. Pronounced venous distention was observed in the neck. Throughout both lung fields wheezes and rhonchi could be heard. The heart sounds were clear and regular. No abnormality was noted in the abdomen. Cyanosis of the finger nails was apparent; there was no clubbing.

Results of examination of the blood and of urinalysis were within normal limits. In x-ray films of the chest, including fluoroscopy, a mediastinal mass was observed in the midline and to the right, lying between the trachea and the esophagus. This mass was sharply demarcated, smooth

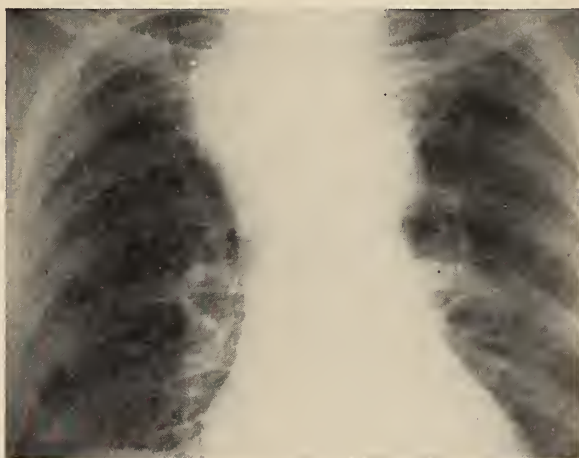


Figure 1



Figure 2

From the Palo Alto Clinic, Palo Alto.

in outline, showed no evidence of invasion of the lung fields, and was separate from the cardiovascular shadows. Displacement of the esophagus in the right upper mediastinum was demonstrated by a swallow of barium (Figures 1 and 2).

The patient became progressively worse despite supporting measures that included intranasal administration of oxygen. The day after the patient entered the hospital an emergency thoracotomy was done in the right chest with intratracheal anesthesia. The intratracheal tube was passed with moderate difficulty, but after it was in place the patient's condition improved abruptly. Upon inspection and palpation of the right side of the chest a 10 x 8 cm. firm mass was noted in the superior mediastinum. There were no other abnormalities. The mass, which did not pulsate, was located between the esophagus dorsally and the trachea ventrally, with the azygos vein coursing inferiorly around it.

The mediastinal pleura was infiltrated with 1 per cent procaine solution and was incised. Then with blunt dissection the mass was entirely freed. The tumor was perforated during removal and a large amount of old and recent blood extruded. The tumor, a very thin-walled cyst into which there had been recent bleeding under tension, had displaced the esophagus dorsally and compressed the trachea ventrally. The patient's condition improved further when the mass was removed. Inspection was made to be sure that all of the cyst wall was removed. There was no evidence of cyst superiorly toward the neck, nor was there any connection to the thyroid gland. One suture loosely approximated the mediastinal pleural edges. A dependent catheter was placed through a stab wound in the chest wall and the chest wall was closed. At the close of the operation the patient's condition was excellent, even after the intratracheal tube was removed. The postoperative course was one of rapid improvement.

In a film taken at bedside the day after operation the site of the mass was scarcely visible and the lung appeared to be properly aerated. The pathologist's report on the material removed showed the tumor to be a simple thyroid cyst of the mediastinum. In places, the cyst wall was only 2 to 3 cells in thickness and there was evidence of bleeding into the cyst. There was no indication of malignant change.

An x-ray film of the chest taken on the eighth postoperative day showed a small amount of fluid in the right pleural cavity. A film taken three weeks later revealed that the chest had cleared; no mediastinal tumor could be seen.

Some five weeks later, because the patient continued to have some cough and episodes of fright because of mild dyspnea upon exertion, more films of the chest were taken. No abnormality was observed. Bronchoscopy was done, and no pathologic changes were seen. The patient thereafter was well, without complaints, and resumed his normal activity and work.

DISCUSSION

Thyroid adenomas and substernal goiters were common in the cases reported upon by Blades,¹ by Brewer and Dolley² and by Samson and Dugan.³ No case of simple thyroid cyst of the mediastinum was reported by those investigators or elsewhere in the available medical literature. The present case, then, was an unusual one. From a surgical point of view it illustrates emergency thoracotomy in a patient who was asphyxiating from tracheal compression. Finally, it shows the dramatic response to the emergency removal of a benign tumor of the superior mediastinum.

300 Homer Avenue.

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Gastrointestinal Hemorrhage Associated with Meckel's Diverticulum

GROSVENOR T. ROOT, M.D., and
B. H. CHRISTENSEN, M.D., Oakland

ULCERATION associated with a Meckel's diverticulum can be an obscure source of gastrointestinal hemorrhage.

The reported incidence of Meckel's diverticulum, as determined from autopsy material, varies from one per cent to three per cent and the incidence is twice as high in males as in females.¹ Although the diverticulum is usually located within the first three feet of ileum above the ileocecal valve, McGraw³ stated that in 28 per cent of a series of cases studied by him the anomaly was at a higher level; and he emphasized the importance of examining the terminal six feet of ileum at the time of exploration in search for a Meckel's diverticulum. McGraw also stated that as Meckel's diverticulum is associated with pathological changes in about half the cases in which it is present, it is advisable to remove any so-called normal Meckel's diverticulum that may be observed during abdominal exploration.

The pathological conditions occurring in association with a Meckel's diverticulum have been classified by Greenblatt² into several groups:

1. The peptic group, in which gastric mucosa is present in the diverticulum. Ulceration may result, and perforation or hemorrhage may occur.
2. The inflammatory group, in which acute inflammation exists and perforation or gangrene may occur.
3. The obstructive group, with resulting intestinal obstruction due to intussusception, volvulus, or adhesions and bands.
4. The tumor group, including both benign and malignant growths.
5. The umbilical group, including fistulas and cysts.

Heterotopic tissue is found in 15 to 25 per cent of all Meckel's diverticula, and in 60 to 75 per cent of diverticula that are producing symptoms.² Gastric mucosa is the tissue most commonly found, and the next most common is duodenal tissue. Occasionally pancreatic tissue may be present. Such gastric mucosa may secrete gastric juice, resulting in erosion or ulceration of the adjacent ileal mucosa, with subsequent hemorrhage or perforation of the ulcer.

The following case report is an example of rather severe gastrointestinal hemorrhage associated with ulceration of the ileal mucosa just distal to the opening of a Meckel's diverticulum.

REPORT OF A CASE

A 49-year-old woman who was admitted to the Samuel Merritt Hospital on July 28, 1951, had been well until she awoke at five o'clock in the morning on the day of admittance to the hospital and passed a considerable amount of dark, tarry material by rectum. In the next hour, four tarry, liquid stools were passed, and in the next few hours there were eight to ten further passages of tarry material. The patient fainted then and was brought into the hospital.

From the Department of Surgery, Samuel Merritt Hospital, Oakland.

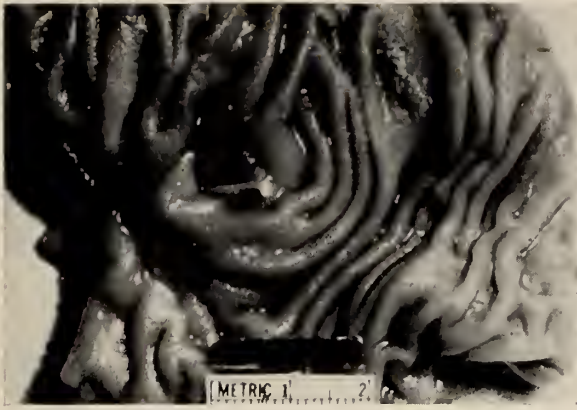


Figure 1.—Photograph of the mucosa of the ileum with probe extending into the diverticulum. Large ulcer with small one adjacent are just below and to the left of the probe.

at 4:30 p.m. There was never any associated pain, nausea or hematemesis.

The patient stated that ten years previously she passed tarry stools and noted weakness for a period of two to three days. However, there was no history of epigastric burning or distress, or of nausea or vomiting. The patient said that nearly every day for 30 years she had had pains in the right lower quadrant of the abdomen, that she had been examined because of this pain and had been told that it was most likely owing to an inflammatory condition involving the right ovary.

Although pale at the time of physical examination the patient was not in a state of shock. The pulse rate was 84, and the blood pressure 116 mm. of mercury systolic and 84 mm. diastolic. An hour later the pulse rate was 80 and the blood pressure 144 mm. systolic and 90 diastolic. Respirations were 20 per minute. The temperature was 98.8° F.

There was mild tenderness in the right lower quadrant of the abdomen. Dark, tarry material was deposited on the examining finger at the time of rectal examination. No abnormality was noted in pelvic examination.

The results of urinalysis were within normal limits. The erythrocyte content of the blood was 2,760,000 per cu. mm. and the hemoglobin value was 52 per cent. Leukocytes numbered 8,150 per cu. mm. and the cell differential was normal. An infusion of two pints of blood was given the first evening the patient was in the hospital, and one pint the next day. After the second infusion of blood the hemoglobin value was 59 per cent, erythrocytes numbered 3,110,000 per cu. mm. and the cell volume was 34 per cent of the whole blood. The following day the hemoglobin value was 80 per cent and the cell volume 41 per cent.

X-ray examination of the gastrointestinal tract was carried out and a duodenal ulcer was believed to be present. This opinion was confirmed upon examination of a film made six hours later when the patient was again given barium by mouth.

Considering the age of the patient and the fact that the gastrointestinal bleeding was the second such episode it was felt that gastric resection was the treatment of choice.

Two days later a transverse incision was made in the upper abdomen. The stomach and duodenum appeared to be normal. The stomach was mobilized after ligation of the vessels along the greater curvature, and the first part of the duodenum, pylorus and stomach could then easily be examined posteriorly. There was no evidence of duodenal ulcer. Upon exploration of the small intestine, a Meckel's diverticulum was observed about 20 inches from the ileocecal valve.

This area of ileum was resected and end-to-end anastomosis of the ileum was done.

The diverticulum was 1.5x2 cm. in diameter, and the diameter of the opening of the diverticulum into the ileum was 8 mm. Distal to the opening there was an ulcer 1.8x0.8x2 cm., and adjacent to it was an ulcer 3 mm. across (Figure 1). Both ulcers contained bright red blood. Microscopic examination of the mucosa of the diverticulum revealed heterotopic tissue similar to the pepsin-producing cells of the stomach. No acid-producing cells were present.

During and after the operation the patient was given blood and fluids as well as terramycin intravenously. The course was entirely uneventful, and the patient was discharged from the hospital a week after the operation.

When last observed, a year later, the patient was entirely asymptomatic and had had no pain in the right lower quadrant of the abdomen. Erythrocytes numbered 3,300,000 per cu. mm. of blood and the hemoglobin value was 72 per cent.

DISCUSSION

Complications associated with a Meckel's diverticulum are much more common in young persons, especially in children, than in persons the age of the patient in the present case.

Although no acid-producing cells were observed microscopically, the ulcerations of the ileal mucosa were probably caused by secretions from tissue in the mucosa of the diverticulum which resembled the pepsin-producing cells of the stomach. Wangenstein and co-workers¹ observed in experimental work on the esophagus that contact of acid gastric juice with the mucosa of the esophagus had a very prompt and devastating effect. Since hydrochloric acid, in concentration similar to that in the gastric juice, had very little effect alone, they concluded that it is peptic activity that is the important factor in ulcer formation.

Bleeding from an ulcer associated with a Meckel's diverticulum is usually evidenced by a "currant jelly" clot, rather than by tarry material as in the present case.

Of special interest was the disappearance of pain in the right lower quadrant of the abdomen, which the patient had had for 30 years, following removal of the portion of ileum containing the Meckel's diverticulum and the ulcers.

This case serves further to emphasize the importance of complete exploration of the gastrointestinal tract, particularly the terminal six feet of ileum, in cases in which bleeding duodenal ulcer is diagnosed and no evidence of duodenal ulceration is found upon operation. As McGraw³ stated, massive bleeding, the most serious condition associated with a Meckel's diverticulum, can be quickly and easily controlled by excision or resection of the involved area.

SUMMARY

A brief discussion of Meckel's diverticulum has been presented, as well as reference to the complications which so often accompany this anomaly. Gastrointestinal bleeding has been particularly emphasized, and a case report pertaining to this complication has been presented.

359 Hawthorne Avenue.

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Coccidioidomycosis of the Epididymis

A Report of Two Cases

G. AMROMIN, M.D., *Exeter, and*
C. M. BLUMENFELD, M.D., *Sacramento*

DESPITE the frequent occurrence of pulmonary coccidioidomycosis in endemic areas, the recorded instances of involvement of the epididymis and testicle are rare.¹ Only four cases have been reported to date.^{2, 6} Following are descriptions of two additional cases of this infection in which the epididymis was involved, with some reference to the further similarity of this fungous infection to tuberculosis.

CASE REPORTS

CASE 1: A 36-year-old white American agricultural chemical salesman, a resident of Tulare County, had pulmonary coccidioidomycosis in 1947. At that time the illness was characterized by fever, malaise, pains in the joints and cough of some three weeks' duration, with a convalescent period of three months. No skin lesions were observed. Reaction to a skin test with coccidioidin in dilution of 1:100 was positive at some time during this illness. Around October, 1950, as nearly as he could recall, the patient noted swelling of the left side of the scrotum. At first this was thought to be a recurrence of an inguinal hernia which had been repaired approximately twelve years previously. Later, however, the patient associated it with minor direct trauma to the region. The swelling appeared to diminish with bed rest, application of heat to the area, and scrotal support. Except for recent appearance of tenderness on touch in the area of the left inguinal region there were no other complaints.

Upon physical examination an elliptical smooth 10x6 cm. swelling in the region of the left scrotum was noted. Tender but not inflamed, it appeared to encompass the testicle and distal epididymis. The lesion was translucent. No other abnormalities were observed in the physical examination.

The left testis and epididymis, and a hydrocele, were removed April 23, 1951. The postoperative course was uneventful except for transient swelling four weeks later in the right part of the scrotum, which completely subsided on bed rest and scrotal support. The wound healed by primary intention.

The excised testicle with surrounding thickened tunica and portions of appended cord structures weighed 75 grams and measured 9x6x4 cm. The tunica vaginalis appeared fibrous, was up to 2 mm. thick, and was gray-white. The inner aspect of the tunica was hemorrhagic and irregular. The epididymis was nodular and firm and contained numerous caseous areas. The testicle measured up to 4.5 cm. in greatest diameter and no abnormalities were visible macroscopically.

In microscopic examination diffuse fibrosis of both the tunica vaginalis and the epididymis was observed. Within the fibrous tissue were multiple granulomas, some with caseous centers surrounded by epithelioid cells, fibroblasts, mononuclear cells, polymorphonuclear leukocytes, plasma cells and multinucleated giant cells. Numerous spherules of coccidioides immitis were noted, many with prominent endospores. Within the tubules of the epididymis were large numbers of round cells and polymorphonuclear leukocytes, as well as spherules of coccidioides immitis. The testicle was apparently uninvolved except for atrophy of the seminiferous tubules and decrease of maturation of spermatozoa. The

diagnosis was coccidioidomycosis of the epididymis with atrophy of the testicle.

In a serologic test for coccidioidal infection three days after the operation there was a 4 plus complement fixation in a 1 to 8 dilution. Precipitins were absent. Examination of blood drawn June 5, 1951, was carried out and complement fixation was 2 plus in a 1 to 16 dilution and 4 plus in 1 to 8 dilution. Precipitins were absent. The conclusion* on the first test was that it confirmed that the lesion was caused by coccidioidal infection, and on the second test that there was "significant rise in titer."

CASE 2: The patient was a Japanese male, 58 years of age. After emigrating from Japan to California, he lived in the Sacramento Valley except for two periods: he was encamped at Tule Lake during the war, and he visited a friend near Stanford University for two days. He worked on ranches at or near Wheatland, Davis and Woodland, California, often in a dusty atmosphere. On March 1, 1948, while pulling up boards from a floor on a ranch at Wheatland, he was struck on the scrotum and perineum by a 2x6 joist. The scrotum and perineum became swollen and blue; blood issued from the urethra, and the patient was unable to void urine. He was treated at a hospital for a rupture of the urethra at the bulbomembranous junction. On the sixth postoperative day an abscess which had developed in the left part of the scrotum was incised and drained. When the patient was discharged, three weeks after the accident, he could urinate normally and all wounds were healed, but the left epididymis was slightly indurated. Since it was at the site of incision for the scrotal abscess, the lesion in the epididymis was considered to be due to local reaction plus the preceding trauma and infection owing to the use of retention catheters in the postoperative period.

The patient returned for observation at intervals of three weeks. Each time, he complained of discomfort or pain in the left part of the scrotum. Moderate swelling of the lower pole of the left epididymis persisted. The patient had no other complaints, and returned to work. The pain persisted, and the epididymis remained enlarged. Surgical removal of the epididymis was advised.

At operation, May 5, 1950, the left testis, epididymis and spermatic cord were removed. Nodular swelling of the tail of the epididymis and related spermatic cord was noted in macroscopic examination of the fixed specimen. In the cut surfaces there was a lesion 1.5 cm. in diameter, consisting of pasty, greenish-yellow material surrounded by a firm gray wall. Microscopic study disclosed conglomerate foci of chronic granulomatous inflammation with numerous areas of necrosis. Large, doubly-contoured, round or oval cells containing numerous endospores were present in necrotic material and in multinucleated giant cells. The diagnosis was coccidioidal granuloma of the tail of the left epididymis, and atrophy of the left testis.

Following upon this diagnosis, an intradermal test with 1:100 coccidioidin was done. A doubtful reaction occurred. No lesions were observed in an x-ray film of the chest. Six weeks later there was swelling and tenderness of the left half of the scrotum, with a small draining sinus in the center of the incisional scar. The left half of the scrotum was removed June 26, 1950. An abscess 1.5 cm. in diameter containing thick green pus was observed in the fixed specimen. It communicated with the free surface by a sinus. An abscess, with granulomatous foci containing coccidioides immitis cells, was seen on microscopic study. The diagnosis was coccidioidal granulomas of the left half of the scrotum. The patient was well after the operation.

* By Charles E. Smith, M.D., Dean, School of Public Health, University of California, Berkeley.

Presented before the Section on Pathology and Bacteriology at the 81st Annual Session of the California Medical Association, Los Angeles, April 27-30, 1952.

TABLE 1.—Data on Six Cases of Coccidioidal Involvement of Genitalia

Reported by	Case No.	Age	Race	Previous History of Infection	Coccidioidin Skin Test	Serologic Test	Miscellaneous
Weyrauch and co-workers ⁶	1	42	W	17 mo.	Slightly positive, 1:10	Compl. fix. Strongly positive Precipitins neg.	-----
	2	31	W	5 yr.	Strongly positive	Compl. fix. Strongly pos. Precipitins neg. Rapid fall after operation	Blow to scrotum accentuated already present swelling (for two years)
Rohn and co-workers ²	1	40	Negro	Testicular swelling began at time of original infection	Positive 1:1000	Compl. fix. 4 plus 1:2 Precipitins neg.	-----
	2	38	Filipino	5 yr.	Questionable 1:10 and 1:100	Compl. fix. pos. through 1:128	Evidence of other sites of involvement and progressive dissemination
Anromin, Blumenfeld	1	36	W	3 yr.	Positive 1:100	Compl. fix. pos. 4 plus 1:8 (4-26-51) Compl. fix. pos. 4 plus 1:8 and 2 plus 1:16 (6-5-51) Precipitins neg.	Questionable history of trauma
	2	58	Japanese	Date unknown	Positive 1:100	None	Blow to scrotum

DISCUSSION

The chlamydospores and arthrospores of *coccidioides immitis* enter the human body through the respiratory tract. In about 40 per cent of persons so infected, pneumonic or respiratory symptoms of sufficient severity to warrant attention occur. However, in only about one case in a hundred in which there is clinical disease does extrapulmonary dissemination occur. If there is to be dissemination, it will happen shortly after the primary infection is incurred, most frequently within weeks and infrequently after a period of months.³ Smith and co-workers¹ reported dissemination in 12 of 1,351 cases of coccidioidal infection studied and noted that the longest period between infection and dissemination was four months. With dissemination, the process may progress as the so-called coccidioidal granuloma, or occasionally undergo complete remission and cure. In some instances, however, dissemination may result in only a single focus of extrapulmonary coccidioidomycosis. This could conceivably be the result of healing of other foci of involvement with only a single active center remaining, or possibly, only a single metastatic lesion may occur at the time of dissemination. Smith and co-workers,⁵ in a study of 419 patients with extrapulmonary lesions, found that 75 (18 per cent) could be classified as having only a single extrapulmonary focus of active coccidioidomycosis. Rohn and co-workers,² in a review of autopsy data on 214 cases of disseminated coccidioidomycosis, noted only two instances in which there was involvement of the epididymis. With the two cases reported by Weyrauch and co-workers⁶ and the two reported herein there are in all six cases of record in which there was involvement of the genitalia (Table 1). In five of the cases apparently the sole or predominant site of extrapulmonary involvement was the epididymis, with or without extension into surrounding tissues.

The extent to which extrapulmonary coccidioidomycosis mimics disseminated tuberculosis has been commented upon by Smith, Beard and Saito.³ The instances of epididymal, scrotal or testicular involvement by *coccidioides immitis*

suggest a similarity to "isolated organ tuberculosis." It is well-known that extrapulmonary tuberculosis may not become clinically manifest until many years after the pulmonary infection. Of interest is the remarkably long period of latency between the primary infection, dissemination, and the clinical evidence of scrotal involvement in five of the six reported cases of coccidioidal involvement of the genitalia. Except for Case 1 of Rohn and co-workers, in which clinical evidence of testicular involvement was present at the time of the original infection, the latent period varied from 17 months to five years. In Case 2 reported herein, actual time of original infection was undetermined. The long interval between known pulmonary infection and clinical genital involvement in coccidioidomycosis emphasizes another point of similarity between tuberculosis and coccidioidomycosis. Apparent clinical cure of primary coccidioidomycosis must be followed by serologic study before single or multiple extrapulmonary sites of involvement can be excluded with certainty. In all reported instances (except Case 2 reported herein, in which serologic test was not performed but a positive reaction to a skin test with coccidioidin was obtained) there was positive reaction to complement fixation tests. It is of interest that in Case 2 reported by Weyrauch and co-workers there was a rapid drop in titer shortly after the removal of the single metastatic focus.

It is of passing interest that in two of the cases (one of those reported by Weyrauch and one reported here) the genital lesion was associated with a blow to the scrotum, and there was a questionable history of trauma in the other of the two cases herein reported.

SUMMARY AND CONCLUSION

Two cases of coccidioidomycosis involving the epididymis and surrounding tissues are reported.

Attention is called to the remarkably long latent periods between the primary pulmonary infection and the clinical evidence of genital involvement.

A parallelism is presented between "isolated organ tuberculosis" long after the primary pulmonary infection has occurred, and a single site of extrapulmonary coccidioidomycosis some time after primary coccidioidomycosis.

215 Crespi Avenue, Exeter.

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Two Cases of Fatal Pancytopenia Following Mesantoin® Therapy

ROY SWARTOUT III, M.D., El Monte

MESANTOIN® (3 methyl -5, 5 ethyl phenyl hydantoin) has been known as an anticonvulsant drug since 1946.⁶ Since that time seven cases of fatal pancytopenia associated with use of the drug have been reported.^{1,2,3,4,5,7,8} The author has observed two such cases in the past four years.

CASE REPORTS

CASE 1: A 15-year-old white boy was admitted to the medical service of the Santa Barbara General Hospital on November 1, 1948, with complaint of furunculosis, bleeding from the nose and gums and multiple hematomas.

The patient had been in good health until a year before admittance when he had two grand mal seizures. In July of 1948 he was examined by a neurologist who prescribed Mesantoin®, 0.1 gm. four times a day. Fourteen days later fever, sore throat, bleeding from the nose and gums and multiple furunculosis developed. Mesantoin was discontinued. At that time the patient was admitted to another hospital and multiple transfusions of blood were given. Bleeding was controlled only on the days blood was administered. The patient had not been able to attend school or to play for the previous three months because the slightest injury caused hemorrhage.

Upon physical examination the patient was observed to be well developed and well nourished. The skin was pale. There was profuse sanguinolent oozing of the gums. The venous pressure was 130 mm. of water. The blood pressure was 110 mm. of mercury systolic and 65 mm. diastolic. The pulse rate was 110 and respirations 28 per minute. The temperature was 100.2° F. A systolic murmur could be heard over the entire precordium, but there was no cardiac enlargement. The liver and spleen could not be percussed or palpated. A Rumpel-Leede test was done and at the end of 4 minutes there were 4 petechiae, at 10 min-

utes 30 petechiae, and at 20 minutes 50 petechiae in the marked area.

Erythrocytes numbered 2,280,000 per cu. mm. of blood and the hemoglobin content was 5.7 gm. per 100 cc. (Sahli). Leukocytes numbered 1,550 per cu. mm.—77 per cent mature lymphocytes and 23 per cent segmental polymorphonuclear cells. The direct platelet count was 95,760. The (Duke) bleeding time was 1 minute, the (Lee White) clotting time was 5 minutes. The prothrombin time was 18 seconds (normal 13). Result of an indirect van den Bergh test was 0.9 mg. per 100 cc. The icteric index was 12 units. A serologic test was negative for syphilis. The range of erythrocyte fragility was from 50 per cent to 38 per cent (normal, 45-30). Blood was observed microscopically in the urine and macroscopically in the stool.

Examination of bone marrow revealed primarily anisocytic erythrocytes. Most of the nucleated cells were lymphocytes. Only 18 per cent of the cells were of the granulocytic series. The majority of the granulocytic series were mature forms.

A diagnosis of pancytopenia caused by Mesantoin was made. Treatment consisting of multiple transfusions, penicillin, liver extract, vitamin B complex, thromboplastin (10 cc.), vitamin K and ferrous sulfate daily was instituted. Despite these measures there was melena, rectal bleeding and severe epistaxis, and the condition of the patient deteriorated. Oozing from the site of the bone marrow puncture did not stop. On the eighteenth hospital day, the patient lapsed into coma and died. Permission for post-mortem examination was refused.

CASE 2: A 53-year-old white woman was examined May 7, 1951, because of complaint of intermittent convulsions for two years. The patient (a registered nurse) stated she had as many as 50 or 60 "Jacksonian seizures" every day. They were described as episodes of numbness and tingling on the right side of the body, aphasia and weakness of the right hand. Frequently there was clonic movement of the right hand. Twice in two years these "slighter spells" had terminated in grand mal convulsions. The patient had been treated elsewhere with Dilantin® and phenobarbital without noticeable change.

At the age of three, the patient fell approximately 15 feet, striking the left side of the head. She knew of no other injury to the head. Until the onset of convulsions she had been in good health and had worked as a surgical nurse.

The patient, thin, anxious, intelligent and cooperative, appeared younger than the stated age.

Pronounced pyorrhea was present. There was considerable tenderness in the left flank. No abnormalities were observed by a neurological consultant. Exophoria was noted by an oculist.

Erythrocytes numbered 4,000,000 per cu. mm. and the hemoglobin content was 12.3 gm. per 100 cc. Leukocytes numbered 8,450 per cu. mm. with normal cell differential. There were 4 cells per cu. mm. of cerebrospinal fluid and the protein content was 50 mg. per 100 cc. Pneumoencephalography was done and widened cerebral sulci consistent with a diagnosis of localized cerebral atrophy were noted on the left side. A diagnosis of localized temporo-parietal Pick's disease was made by the neurosurgical consultant.

Mesantoin, 100 mg. three times a day, was prescribed and the patient was instructed to have urinalysis and examination of the blood at two-week intervals for a month and then once a month. Two weeks after the patient began using Mesantoin the cell content of the blood was still normal and the incidence of seizures had been reduced from 50 to 60 a day to 10 to 20. The dosage of Mesantoin

From the Department of Medicine, Medical Center of El Monte.

was increased to 100 mg. four times a day and was continued for seven months, during which time the patient did not report for examination of the blood. The seizures, however, apparently were well controlled.

On December 17, 1951, the patient reported because she was having "electric shock" sensations on the right side of the tongue very similar to the sensations she had originally reported having in the right hand. Upon physical examination multiple purpuric spots over the entire body were noted and the patient was hospitalized immediately.

The hemoglobin content of the blood was 6.4 gm. per 100 cc. Erythrocytes numbered 2,580,000 per cu. mm. and leukocytes 2,250. Clotting time was 7½ minutes (capillary tube method) and bleeding time 45 seconds (Duke). The prothrombin time was 14 seconds. The icteric index was 12. Pronounced hypoplasia of all the leukocyte elements was noted in examination of the bone marrow. Result of a serologic test for syphilis was negative. A Rumpel-Leede test was done and numerous petechiae appeared. There was blood in the urine and in the stool. No abnormality was noted in an x-ray film of the chest.

The patient was given multiple transfusions, penicillin, liver extract, Terramycin, vitamin K, Pentnucleotide® and ferrous sulfate. At the time bone marrow was aspirated for biopsy, 60 mg. of iron peptonate was instilled into the marrow. This had no apparent effect.

The condition of the patient deteriorated steadily. On the eleventh hospital day there was sudden onset of congestive heart failure and the patient died.

Postmortem examination. The bone marrow was essentially as has been described. The brain weighed 1,250 grams. Moderate subarachnoid edema was present and there were scattered small areas of subarachnoid hemorrhage over both cerebral hemispheres. In the left temporoparietal area there was an irregular firm yellow-red area surrounded by subarachnoid hemorrhage. In the area of the left external capsule were several scattered areas of cystic degeneration up to 2 cm. in diameter. In histological examination of the spongy area of the left temporoparietal region, cortical astrocytoma, Grade II, was noted.

The postmortem diagnosis was (1) aplastic anemia secondary to Mesantoin, (2) cortical astrocytoma, Grade II, of the left temporoparietal area and (3) multiple subarachnoid hemorrhages of the brain.

DISCUSSION

The cases here reported illustrate the fact that toxic reaction to Mesantoin may occur very early or late in a course of treatment. Unremitting caution must be exercised

in using drugs of the hydantoinate group and the blood must be examined frequently. The patient in Case 2, although a nurse who should be expected to heed the instructions given for periodic examination of the blood, did not report for examination although she continued to take a potentially dangerous drug. Now, at the Medical Center of El Monte a list is kept of persons receiving toxic drugs and a note is made of the date they are scheduled to have follow-up examination of the blood. If the appointment is not kept, a registered letter is sent repeating the warnings already given to the patient and urging prompt medical attention.

SUMMARY

Two fatal cases of pancytopenia following Mesantoin therapy are reported. In one case toxic manifestations appeared late in the course of treatment with Mesantoin. Although the patient had been instructed to return periodically for examination of the blood, she had not done so. A follow-up system for keeping track of patients who do not report on schedule while taking toxic drugs is suggested.

701 South Hoyt Avenue.

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California M E D I C I N E

EDITORIAL

Handsome Is . . .

THERE IS MUCH that is positive, with regard to public relations, as the medical profession previews 1953.

This encouraging circumstance is not the result of what we have *said* about ourselves so much as it is the result of what the profession has been *doing* and what others—publishers and political leaders—are saying of these actions.

Examples?

Without taking a professional position on the C.M.A.-C.P.S. report presented at the December meeting of the House of Delegates, here are two typical editorial comments from two of California's leading newspapers:

San Francisco News: "That the national leadership first taken by California's organized medicos 15 years ago is reasserted now in these new enlightened proposals should be a matter of pride to members of the profession and of gratification to the populace which will benefit when and if they are carried into effect."

Los Angeles Times: "These voluntary and cooperative methods [Blue Shield] of meeting problems will be much more satisfactory than the plans for compulsory health insurance run by the government."

This positiveness may well be the reason for Governor Warren's announcement late in December that he would have no specific recommendations to the 1953 session of the Legislature on health insurance.

Positive too, for the profession, was Oveta Culp Hobby's colloquy with the editor of *U. S. News and World Report*:

Editor: "You certainly don't favor socialized medicine, do you?"

Hobby: "Oh, no."

Editor: "I believe Eisenhower said something on this subject in his Los Angeles speech—do you remember the direct quote?"

Hobby: "I have a copy. He said: ' . . . The answer is to build on the system of voluntary, non-profit insurance plans, which our people have already developed at an amazing rate. Much remains to be done to perfect these plans so that they really supply adequate protection. But to destroy all this by piling government medicine on top would be disastrous.' "

Further positive recognition is accorded the profession in its endeavors in the field of cancer research while at the same time it makes every effort to keep the public from the clutches of charlatans.

The *Los Angeles Times* editorialized: "The members of the medical profession are doing all they can to develop a real cure for cancer. They are as anxious in this quest as cancer sufferers themselves. It is from their officially constituted bodies alone, and only after lengthy testing, that the public can look for a reliable announcement of a true cure for the affliction."

Surely then it is not too much to hope that as we approach our problems and our projects in the future, the profession's leaders at all levels—national, state and county—will keep in this positive vein.

Too long, in our opinion, have the derelictions of but a few been to the detriment of the many.

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CALIFORNIA MEDICAL ASSOCIATION

NOTICES & REPORTS

The "Permanente" Plan: Its Organizational Form

THE PERMANENTE system consists of four inter-related organizations together operating seven hospitals, twelve clinics, one research institute (at Belmont) and three rehabilitation centers.² Three hospitals* are under construction.² Its medical staff and hospitals furnish medical care and hospitalization to approximately 160,000 people in the San Francisco Bay Area, 50,000 in Southern California and 25,000 in the Portland, Ore.-Vancouver, Wash., area.³

The four organizations are:

A. *The Permanente Foundation:* This is the parent body founded on August 1, 1942. It is a "charitable trust" and was created by the California Kaiser Company, a Nevada corporation, for various purposes including furnishing of medical, nursing and hospital care, scientific research and medical education.¹ Its initial capital consisted of the old Fabiola Hospital in Oakland, subject to a mortgage of substantial size. The Foundation is governed by a self-perpetuating board of trustees, the original trustees being Mr. and Mrs. Henry J. Kaiser, their son Edgar, their attorneys, Paul S. Marrin and Thomas K. McCarthy, and two of Mr. Kaiser's business executives, E. E. Trefethen, Jr., and G. G. Sherwood. The Foundation *owns* the various hospitals, clinics and rehabilitation centers. It does not *operate* them, this being the function of the organizations described below. Its revenues are derived from rentals paid for use of its buildings and facilities.

B. *The Permanente Health Plan:* This is the entity that sells medical and hospital care to the public. It is a "non-profit trust" created on September 8, 1945, with an initial capital of \$5,000. Its function is "to enroll members, collect funds and keep records of eligibility."⁴ For monthly charges ranging from \$3.25 to \$6.95 it offers medical and surgical

*These hospitals are in San Francisco, Los Angeles and Walnut Creek.

care by Permanente physicians, hospital care in Permanente hospitals and drugs and medicine while hospitalized.⁵ Subscribers are charged \$2.00 per home call after the first, \$1.00 per office visit, \$60.00 per confinement and \$15.00 for a tonsillectomy. Dependents must pay \$2.00 per home visit, \$1.00 per office visit, \$95.00 per confinement and \$35.00 for a tonsillectomy. These charges are in addition to the regular monthly fees.⁵ The Health Plan obtains the medical care that it sells by purchasing same from the "Permanente Medical Group" and it secures hospital facilities for its subscribers and their dependents by purchase from the Permanente Hospitals, a corporation. Actually, it divides its revenues as follows: A portion (estimated at 40 per cent) to the "Medical Group," another portion (also estimated at 40 per cent) to the Permanente Hospitals, and the remainder it retains for its own administrative and sales costs.⁴ The Health Plan is governed by a board of trustees including Kaiser executives, E. E. Trefethen, Jr., G. G. Sherwood and Harry F. Morton, and Kaiser attorneys, Thomas T. Inch and Thomas K. McCarthy.

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C. *The Permanente Hospitals*: This is a California non-profit corporation organized in February 1948. It was incorporated by three attorneys in the law firm of Thelen, Marrin, Johnson and Bridges which represents Henry J. Kaiser. It leases from the Permanente Foundation the various hospitals and clinics owned by the Foundation. In turn, it receives money from the Health Plan (as above outlined) and from the "Medical Group" for use by the physicians of out-patient departments of the hospitals. It also collects from whatever "private" patients use the Permanente hospitals.

D. *Permanente Medical Groups*: These are or will be partnerships of physicians who furnish medical services to the people who buy the "Health Plan." One such partnership, headed by Dr. Sidney R. Garfield, exists in the San Francisco Bay area. Others, apparently, are planned elsewhere in the state.⁴ Senior Permanente physicians are partners, those with little seniority are employees on a fixed salary basis. These physicians are the professional staff serving Health Plan subscribers and families. Their source of income consists of that portion of Health Plan monthly charges that is allocated to the "Medical Group" plus, it is believed, a portion of the *additional* fees paid by Health Plan families for home and office visits, maternity cases, tonsillectomies, etc.

E. *Miscellaneous*: In addition to the big four "Permanente" organizations there are several auxiliaries, such as Kabat-Kaiser Institute, a California non-profit corporation; Royfield Company; Perma-

nente School of Nursing and the research institute at Belmont.

These closely knit enterprises are unique in the application to medical and hospital care of two mass-production concepts: (1) assurance of the large clientele or "market" through prepayment (thus steering subscribers to Permanente hospitals and physicians) with ample revenues from monthly fees plus extra charges of one sort or another, and (2) utilization of surplus funds for expansion and even more expansion (the non-profit trust concept eliminates distribution of excess funds to the founders as well as taxation of such funds—hence, expansion is the only outlet). The economics of the application of industrial mass production techniques to the highly personal, sensitive physician-patient relationship is well stated by Dr. Garfield: "The greatest tribute to this economic achievement is the present loan secured from the banks for our new construction. One million dollars of the new \$9,500,000 projects was donated by the Henry J. Kaiser Company and the Kaiser Steel Corporation. The remainder will be financed by commercial banks."⁴

REFERENCES

1. Official Records, County Recorder of Alameda County, Oct. 21, 1942, Book 4302 at page 163.
2. Permanente Foundation Medical Bulletin, Vol. X, Nos. 1-4, p. 6, Aug. 1952.
3. Permanente Foundation Medical Bulletin, Vol. X, Nos. 1-4, pp. 1-3, Aug. 1952.
4. Permanente Foundation Medical Bulletin, Vol. X, Nos. 1-4, p. 5, Aug. 1952.
5. Permanente Health Plan sales literature marked "Form P-101-7-52."

Proceedings, Interim Session, House of Delegates

San Francisco, December 6-7, 1952

Saturday Morning Session

The Interim Session of the House of Delegates of the California Medical Association was called to order on Saturday, December 6, 1952, 10:15 a.m., in the Room of the Dons, Mark Hopkins Hotel, San Francisco, Calif.; Dr. Donald Charnock, Speaker, presiding.

DR. DONALD A. CHARNOCK: Ladies and gentlemen, the Second Interim Session of the House of Delegates of the California Medical Association will please be in order. The first order of business is the report of the chairman of the Credentials Committee, Dr. Thomas M. Foster of San Jose.

REPORT OF CREDENTIALS COMMITTEE

DR. THOMAS M. FOSTER: Mr. Speaker, a quorum is present and seated, there being substantially more than 130 members present at this time.

SPEAKER CHARNOCK: Thank you, Dr. Foster. With the consent of the House, we'll take this quorum report in lieu of a roll call. The roll call is visually put on the large board in the lobby, so that at any time you can verify the presence of a quorum.

There are just a couple of announcements to make. First I should like to name the Reference Committees. Reference Committee No. 1: Douglas H. Batten, San Diego, chairman; Roland J. Jantzen, Ventura; and J. W. Moore, Ventura. Reference Committee No. 2: Stanley Truman, Oakland, chairman; John C. Ruddock, Los Angeles; and Samuel B. Randall, Santa Cruz. Reference Committee No. 3: E. C. Halley, Fresno, chairman; E. C. Rosenow, Jr., Pasadena; and Francis Rochex, San Francisco. Reference Committee No. 4: Dr. Arthur A. Kirchner, Los Angeles, chairman; Wayne P. McKee, Ferndale; and Albert G. Miller, San Mateo. Credentials Committee: Thomas Foster, San Jose, chairman; Patrick F. Taft and Ewing L. Turner of Los Angeles. With the consent of the House, these committees will stand.

At this time it is my privilege to present to you the President of the California Medical Association, Dr. Lewis A. Alesen. (Applause.)

ADDRESS BY LEWIS A. ALESEN

DR. LEWIS A. ALESEN: Mr. Speaker, ladies and gentlemen of the House of Delegates, it is a pleasure to be here. I am proud to be a Doctor of Medicine, and I'm proud to be a member of the California Medical Association.

The duty I have to perform this morning indeed is a most pleasurable one, as you will see in just a few moments. One of the happy experiences of my

young life during my college years was the opportunity to read that book by Ian Maclaren, "Beside the Bonnie Briar Bush," and you will recall that a large portion of the book is devoted to the life and activities of a doctor of the old school. A man by the name of William MacLure spent forty years of his life serving the little Scottish community of Drumtochty, and in the heat of summer and the cold and snows of the winter, old Dr. William MacLure was never found wanting. He traveled for miles and miles across the mountain ranges. When the time came that Dr. William MacLure died, it was a cold wintry day, and the roads were all blocked for the funeral services, and everybody, at least those people whom he had served for so many years, came to pay tribute to him. At the time I read that book, I was stimulated by the life and the activities of this wonderful man, and I've often thought of the things doctors actually do for their patients—things that don't very often get into the front.

It is appropriate that the California Medical Association should see fit to pay tribute to associates and senior citizens before they have passed into the Great Beyond. It has been the custom, as you know, in the past several years, to give a fifty-year pin to our members who have been members for that length of time. This morning the gentleman that we're about to honor is a man who has practiced in Oakland for that number of years. He was born in Santa Cruz in 1877. He graduated from the University of California in 1902, and went down to Monterey County for practice for about five or six years. From there he went to practice in Oakland, where he has worked ever since. His grandfather was one of the founders of the Pony Express. During this doctor's life, he has been a general practitioner of the old school. He has done a great deal of work in medical organizations, particularly in malpractice, where he has been chairman of the Alameda-Contra Costa Medical Society Malpractice Committee for a number of years, and though he's retired, he still is active in that committee's work. He has three children, eight grandchildren, and three great-grandchildren. Mr. Speaker, it is a pleasure to present a fifty-year pin to Dr. Ergo A. Majors. (Applause.)

... Whereupon Dr. Alesen presented a fifty-year pin to Dr. Majors. ...

ADDRESS BY ERGO MAJORS

DR. ERGO MAJORS: Delegates, ladies, members, President Alesen, I have you to thank for this honor, and my father the honor for giving me good genes, I think. The only thing about me is I've practiced fifty years, but I want to say that I have not retired. (Laughter and applause.)

I would just like to tell you a few little stories about the beginning of my life. I started in Toland College on Chestnut Street, and went there for about three months. Dr. Cole was then the dean of the college, and I remember his statement the day we arrived. He said, "Gentlemen, this is the only building in the State of California that has a surplus after being built, and it is the only honest building in the State of California." That was true. There were several thousand dollars left after having built and equipped the building.

I want to tell you about the first operation I ever saw. I was sitting in the operating room at old County Hospital and Dr. Robert McClaine was the operator. In those days a man was judged by his ability to amputate a leg or arm or finger. I remember seeing him come in in his Prince Albert suit, walk over to the sink, take off his double cuffs, roll up his sleeves, put on a kitchen apron, take a bar of soap, and wash his hands. Then he went over, and his face was draped. I remember seeing him put iodine all over the leg, and in four minutes that leg was off. He was considered one of the best surgeons in the United States at that time. (Laughter.)

I also remember watching our friend, Dr. J. Henry Barbat, one of the early surgeons from San Francisco, take about three hours to get an appendix. I sat there admiringly, wondering if I would ever be able to do such a thing. Nowadays I believe a man is considered to be a good or fair surgeon if he gets it out in about ten or fifteen minutes. But that was three hours.

I went from San Francisco to Monterey County. I don't think most of you men have ever seen a large typhoid abscess around the neck. In fact I guess most of you are not familiar with typhoid fever. I took a pocket case and opened this thing up. Pus ran all over everywhere; and the man got well, and is a prosperous farmer down there now. But if we didn't make money any other time in the year, in the fall we always managed to clean up with typhoid fever.

I remember one of the lecturers at the University said, "You can smell typhoid." Well, I got so I could smell it. When you went in the room, you got a peculiar odor. But I've lost that knack now.

I want to tell you one of the very first cases I had down there. One morning I was asleep and a fellow stepped up on the porch of our little house and he said, "Hurry up. My boy's got lockjaw." I got my pocket case and chloroform and cotton, and I said to my wife, "My God, I've never seen a case of lockjaw." I handed her a book and said, "Read this quick." It said there had been a serum discovered that was of questionable value, but it should be used in case of lockjaw, and you should get out the seat of infection, give morphine, and stand by with chloroform whenever the patient had a spasm.

Well I rushed into my little office, I got my package of chloroform, got the cotton, my little pocket case, and got out in front, and here was a man in a "breaking cart." He had two horses on the end of a board on a pair of wheels. There were no springs.

There was no side or any protection, and we went eighteen miles up into the mountains, me holding on with one hand, and holding my precious drugs in the other. We got there, though. There was no question he had lockjaw, and he had it in a stone bruise in the heel. I got that out by having one of the boys put him under, and having a cowboy keep him under chloroform. All I had was a pocket case. After getting that done, I read about this serum, and I organized the boys into a pony express, as it were, and sent them into town to telephone to get some of this out on the afternoon train.

The train that was to bring it should arrive at 10:10 that night. They had phoned Salinas to have the package ready. When the train came in, the conductor didn't know about the package. Everybody in the neighborhood had arrived by that time, and there was a crowd there. One of the boys jumped up and pulled the engineer off and said, "We want that package." He said, "I haven't got it." When they got to the express car, the man pulled a gun on them—thought they were being robbed—but they made him take out every package in the express car until they got down nearly to the last, and they found it, and came out that distance in fifty-six minutes.

About six years ago this story was written up in the *Saturday Evening Post*, and they never bothered us because we held up that mail one hour and twenty minutes. The man got well and is the father of sixteen children. (Laughter.)

One more case now showing what the country doctor has to do. I was sitting one night alongside this boy with whom I stayed nine days and nights, and I looked up and there was the face of a man at the window with a spearhead mustache, and it startled me. It happened to be the uncle of this boy, and he said to me, "One day if ever I get sick, you're going to have to take care of me." So about three years later, they came in one night after me and said this fellow was terribly sick back in the mountains. I went up to the end of the road where the trail began and found him yellow as a pumpkin, all swollen up, with a great big abscess in the upper right abdomen. We carried him out on a stretcher three miles to the end of the trail and put him on a wagon full of straw, and by the time we got down to where we were just about to enter Salinas, we picked up fourteen different people. That is the grapevine in the country—travels almost as fast as telephones. When we got there the man was about to die and I said to him, "Now listen, fellow. We're going to have to do something desperate for you because I don't think you'll reach town." He said, "Yes, doctor, whatever you say."

In those days we didn't have novocaine, but I had some crystals of cocaine with me. I sent a boy down to the river with a pail and he brought up some water, and I made a solution (I don't know the strength) and anesthetized the abdomen.

But to go back, when the boy was after the water, we had an old Baptist minister with us, and he said, "Boys, let's kneel and pray that God will help the hands of the young doctor about to operate on this

brother." He got us down on the ground and he prayed and prayed and prayed, and my knees got sore, and I think everybody else's, and I finally stopped him and said, "Now, listen, this man will be in God's hands if you don't shut up." (Laughter.)

Well, I made an incision and pus and gallstones flew all over the place. (Laughter.) I took him to town, he got well, and lived to die of locomotor ataxia over in Santa Cruz.

That's the lot of the country doctor. Through rain and storms, we had to drive horses. The speed limit of the horses—not the law limit, but the speed limit—about eight miles an hour. We got \$25 for a confinement, and \$1.00 a mile mileage on top of that.

I remember one day I was called up to Gonzales, eight miles north of Soledad, to see an old man who I thought was sick. He said, "Doctor, you know I've been doctoring my boy. He's got Bright's disease. I've been giving him infusions of brucine and I know he's got Bright's disease because it made him urinate more."

We started out in the fog, my wife and I, about seven o'clock at night, and we missed the road that we should have turned off, but there was another road a little farther on. I got up there (I always drove with a lantern on my dashboard) and we came to a California gate—a wire attached to a post, and a loop of wire at the bottom of another post. First thing I knew the horses jumped and we were in this wire gate which had been left down. My wife jumped out to hold the horses. I talked to the horses and got them out of that and then went on.

I told you about smelling typhoid. About 200 feet from the house I could smell it. The man had an abscess on the right lung, and was spitting up tremendous amounts of pus. That was the Bright's disease. I told him what to feed him, gave him a little something I had with me, and six months later he came in and said, "Well, I'm fine," and a year later he was running a blacksmith shop down south someplace. Those are some of the things you get.

One time I went sixty miles over the mountains, forty on horseback, down into the canyon. An old fellow had a fractured thigh, and when we got through he said, "Now, doctor, you know I have no money, but God will pay you as soon as you go to heaven."

The general practice of medicine to me has been a great pleasure. It's been my hobby, my joy, because you become an intimate part of the family. I have said funeral sermons, I have advised people as to their family relationships. I have been part of hundreds of families. I think that a specialty is a wonderful thing. It's very remunerative, and you can work very hard at it. But to me the general practice of medicine has been a great joy. I thank you very much. (Applause.)

SPEAKER CHARNOCK: Thank you, Dr. Majors, for some very interesting reminiscences. I couldn't help but be interested in the Pony Express. I don't know as we've added so much today. Of course he would have a siren along with him today. (Laughter.)

The next order of business is the report of Reference Committee No. 3, Dr. E. C. Halley of Fresno, chairman.

REPORT OF REFERENCE COMMITTEE NO. 3

DR. E. C. HALLEY: Mr. Speaker, and members of the House of Delegates: Reference Committee No. 3, composed of Dr. E. C. Rosenow, Jr., of Los Angeles County, Dr. Francis Rochex of San Francisco County, and Dr. E. C. Halley of Fresno County offers the following report dealing with and making recommendations on all matters submitted to it in accordance with Chapter V, Section 9, of the C.M.A. By-Laws.

The committee received from the House of Delegates seventeen resolutions at the meeting of April 27. Two resolutions, No. 13 and No. 14, as introduced by Dr. J. D. McCarthy of Monterey, were withdrawn at his request during committee hearings after discussion revealed vigorous action was already being taken to eliminate those abuses which led to the drafting of these two resolutions. Seven resolutions were accepted by the House as emergency resolutions and acted upon and disposed of at that session. The disposition of the seven emergency resolutions is a matter of record as printed in the official journal of this Association, to wit: CALIFORNIA MEDICINE, Vol. 77, No. 1, under date of July 1952. We see no reason for duplication of that record in this report. To clarify the record, Resolution No. 15 referring to simplification of C.P.S. contracts was inadvertently numbered 5 in the House of Delegates proceedings as published in CALIFORNIA MEDICINE and was officially referred to the C.P.S. Study Committee.

As a consequence of the action of the House, there have remained in the hands of Reference Committee No. 3 the following eight resolutions. These eight resolutions shall therefore be presented to the House for action at the Interim Session to be held in December, 1952.

Resolution No. 3 was introduced by Dr. Carl Hadley of San Bernardino County, and is as follows:

WHEREAS, The use of blood has reached a great importance in the practice of medicine and in the care of the sick; and

WHEREAS, Blood is being extensively used in the prevention of death, both in domestic life and in battle areas; and

WHEREAS, The collection and dispensing of this blood is a medical problem in all its aspects; and

WHEREAS, The collection and dispensing of this blood is being performed by the affiliated blood banks of the California Blood Bank Association; and

WHEREAS, The provision of blood for individuals with no financial or replacement obligation tends to undermine the self-reliance and independence of the public; and

WHEREAS, Certain civilian blood procurement programs purport to provide blood for civilian individuals without such responsibility; and

WHEREAS, The magnitude of this program is such as to overtax the financial resources of any voluntarily supported agency, and will inevitably lead to the transfer of such a program to the government as another socialistic and paternalistic enterprise; now, therefore, be it

Resolved, That the House of Delegates of the California Medical Association go on record in recommending that the entire collection and dispensing of blood in California shall be under the direction and control of the California Blood Bank Commission.

We of the committee offer the following: We were in agreement with the intent of this resolution when it was delivered to us at the Annual Meeting of April 1952. We were then prepared to recommend favorable action by the House, although we realized that there were many problems in the implementation of this resolution, in that this resolution has been held in committee since the last annual meeting. We have sought the advice of Dr. J. R. Upton, chairman of the C.M.A. Blood Bank Commission. Through the kindness of Dr. Upton, all C.M.A. Blood Bank Commission members, and the medical directors of our California Blood System Banks were polled as to their opinion with reference to the resolution. The result of said poll was favorable to the resolution and the C.M.A. Blood Bank Commission recommends a *do pass*. Your Reference Committee is now prepared to recommend passage of this resolution except that we have substituted the correct title, to wit: California Medical Association Blood Bank Commission in two instances where incorrect terminology appears.

Your committee considers this resolution as stating a matter of principle rather than a specific method of operation and we recommend a *do pass*.

Mr. Speaker, I move the acceptance of this section of the report.

SPEAKER CHARNOCK: It has been moved that this section of the report be accepted. Is there any discussion?

DR. C. J. ATTWOOD: Members of the House of Delegates, I wish to submit to you a substitute resolution, and to amend the resolution by the substitution of this resolution, which I will now read to you. In explanation, however, I would like to say that the delegation from Alameda-Contra Costa County has only high praise and thinks we have a great debt of gratitude to the Blood Bank Commission, and to the director, Dr. Upton. We object, however, to the wording of the resolution, which definitely gives to the Blood Bank Commission "direction and control." We think that as a matter of policy, and without anything whatever to do with the present members of that commission, that it would be an inadvisable thing to give to one commission, bureau, or any other group, such dictatorial powers over all the blood banks of our state, and that that might prove to be a disadvantageous thing in years to come, no matter what it is at the present time. Therefore we have drawn up a substitute resolution, and I have been authorized just a few moments ago by Dr.

Upton to state to you that he and the other members of the Blood Bank Commission, as now constituted, are agreeable and willing to accept this substitute resolution. They have approved of it. They have seen it. They know its wording, so that in accepting this substitute resolution, I'm authorized by Dr. Upton to say that it is with his blessing, and that he is agreeable to it. I will now read the substitute resolution.

WHEREAS, The use of blood has attained great importance in the practice of medicine and in the care of the sick, and is being extensively used in the prevention of death, both in domestic life and in battle areas; and

WHEREAS, In California the collection and dispensing of blood is largely being performed by the various non-profit community blood banks, controlled, operated, and/or sponsored by county medical societies, all of which are affiliated together under the title California Blood Bank System, and as such federation, work in partnership with the Blood Bank Commission of the California Medical Association; and

WHEREAS, The provision of blood for individuals without requiring financial or replacement obligations tends to undermine self-reliance and independence on the part of the public generally; and

WHEREAS, The magnitude of this type of program could well overtax the financial resources of any agency dependent upon voluntary contributions and hence could inevitably lead to transfer of such a program to the government as a socialistic and paternalistic enterprise; now, therefore, be it

Resolved, That the House of Delegates of the California Medical Association recommends that the collection and dispensing of blood in California be carried on by financially self-supporting, non-profit, community blood banks, controlled, operated, and/or sponsored by the county medical societies operating within the framework of the federation known as "California Blood Bank System," and with proper guidance and assistance from the Blood Bank Commission of the California Medical Association.

I move the acceptance of this substitute resolution for Resolution No. 3.

... Whereupon a vote was taken and the substitute resolution was passed. ...

SPEAKER CHARNOCK: We will now vote on the report of Resolution No. 3 as amended by the substitute.

... Whereupon a vote was taken and Resolution No. 3 was passed as amended. ...

DR. HALLEY: Resolution No. 4 was introduced by Dr. Henry Gibbons III of San Francisco County. It is as follows:

WHEREAS, The House of Delegates of the A.M.A. has adopted a resolution urging all constituent medical associations to form "grievance committees" to hear complaints from the public; and

WHEREAS, C.M.A. now has nineteen "grievance committees" in operation, offering the public a

means for the arbitration of complaints concerning the 11,000 members of organized medicine; and

WHEREAS, There are an estimated 5,000 licensed physicians practicing in this state who are not members of organized medicine and therefore beyond its jurisdiction; and

WHEREAS, Unethical acts on the part of any doctor reflect on the medical profession as a whole, and it is essential that some method be devised whereby the public may be furnished with a means of arbitrating disputes between patients and non-member physicians; now therefore, be it

Resolved, That C.M.A. undertake a study of ways and means to enable the public to register complaints against any physician licensed in this state and have controversies properly adjudicated; and be it further

Resolved, That if it can be demonstrated that the establishment of such a forum would be feasible and effective, that proper steps be taken to acquaint the public with its existence.

Your committee feels that this resolution offers insurmountable difficulties; that it would be most impossible for C.M.A. to devise ways of arbitrating disputes between patients and physicians not members of organized medicine. Because this resolution makes mandatory that C.M.A. undertake such a study and because we feel that such a study is more properly the function of the county medical societies, we recommend it *do not pass*.

Mr. Speaker, I move the adoption of this section of the report.

SPEAKER CHARNOCK: Are you ready for the question? An "aye" vote on this, of course, will kill this resolution, as the committee has voted that it *do not pass*.

... Whereupon a vote was taken and the resolution did not pass. . . .

DR. HALLEY: Resolution No. 5 was introduced by Dr. Henry Gibbons III of San Francisco County and it reads as follows:

WHEREAS, A number of doctors who accept C.P.S. cases are reported to have presented false claims for service; and

WHEREAS, These false claims are alleged to have cost the funds of C.P.S. about one million dollars during the last year; and

WHEREAS, This reported falsification reflects on the management of C.P.S. and the integrity of the physicians involved; now, therefore, be it

Resolved, That the House of Delegates of the California Medical Association recommends that each component county medical society cooperate in helping to establish facts and in proceeding with suitable disciplinary measures against any of its members found guilty of such practices.

It was the opinion of this committee that possibly some of the losses incurred by C.P.S. were not due to false claims but rather to overuse of the plan.

Subsequent developments following our annual meeting of May, 1952, have pretty well substantiated our opinion. Nevertheless, we feel that a very strong stand should be made on the abuses referred to and we therefore recommend a *do pass*.

Mr. Speaker, I move the adoption of this section of our report.

... Whereupon a vote was taken and the section was adopted. . . .

Resolution No. 9 was introduced by Dr. Burt Davis of Santa Clara County and reads as follows:

WHEREAS, The American Medical Association has expressed editorially in the *Journal* dated April 12, 1952, a desire for amendments to the income tax laws providing for tax postponements for moneys set aside for pensions of persons engaged in private individual enterprise, including Doctors of Medicine; and

WHEREAS, The House of Delegates of the California Medical Association has expressed an interest in amortizing over an appropriate period the cost of all technical and professional training; now, therefore, be it

Resolved, That the House of Delegates of the California Medical Association request the American Medical Association to expand its program of tax reform to include the capitalization of the costs of technical and professional education for tax amortization over an appropriate period.

At the Annual Session in May 1951 a similar resolution was defeated by the House after the Reference Committee had pointed out that precedents and decisions had been established in the Internal Revenue Department against such amortization. The editorial from the American Medical Association referred to in the resolution concerns the Reed-Keogh Bill (H. R. 4371 and H. R. 4373). The bill would provide for a voluntary pension plan for self-employed professional individuals wherein these individuals could exclude from current taxable income amounts sufficient to finance a reasonable retirement annuity. Your committee feels that the Reed-Keogh Bill has much more chance of favorable action than would a bill to provide for tax amortization of a professional education. There must be some limitation on what the medical profession should ask for all at one time; especially as this resolution proposes action in tax matters equally germane to other professions. Your committee is of the opinion nothing additional would be accomplished by the adoption of this resolution and recommends *do not pass*.

Mr. Speaker, I move the adoption of this section of our report.

SPEAKER CHARNOCK: Is there any discussion?

DR. BURT DAVIS: This mimeographed report of Reference Committee No. 3 which you have before you I note is dated November 1. Since the report was prepared, at least two things have happened. There has been some change in the prospect for political thinking in Washington and elsewhere, for

one point, and the second point is that Congress took no action on this Reed-Keogh Bill, and therefore these comments are not pertinent. Now it may be that Reed-Keogh will be reintroduced in the next Congress. If it is, some of these points covered by this resolution would be good to bring before the new Congress. I see no reason for basing our vote this morning on an opinion which was rendered under other circumstances, and I should like to move that this be returned to the committee for further study and brought up at the next annual session, after the new Congress has had an opportunity to take some action along this line.

... Whereupon a vote was taken, the motion was passed, and the resolution was recommitted to Reference Committee No. 3. . . .

DR. HALLEY: Resolution No. 10 was introduced by Dr. Burt Davis of Santa Clara County and is as follows:

WHEREAS, The 1951 House of Delegates of the California Medical Association at the May meeting passed a resolution concerning the financial contributions made to the Crippled Children's Program by the local, state, and federal governments; and

WHEREAS, This resolution called attention to the fact that less than 10 per cent of the funds are appropriated by the federal governments; and

WHEREAS, The resolution took cognizance of the fact that, despite the small proportion of federal moneys invested, the administrative policies are dictated by the administrators of the federal act; and

WHEREAS, The resolution advocated "if necessary that state and local governments conduct these programs themselves without federal assistance"; and

WHEREAS, This matter has come to the attention of the California State Legislature in its budgetary meeting March, 1952; and

WHEREAS, This matter has been under consideration by the Interim Ways and Means Committee and is also being considered by the Interim Public Health Committee at the present time; and

WHEREAS, These committees will report to the 1953 Legislature in January of that year offering such suggestions as they deem necessary and advisable; now, therefore, be it

Resolved, That the House of Delegates of the California Medical Association hereby reaffirms its stand taken in 1951 that the Crippled Children's Act, as largely financed by the state and local governments, is a state and local affair and should not be subject to the whims and fancies of federal administrators no matter how sincere; and be it further

Resolved, That the House of Delegates of the California Medical Association instruct the secretary of the Association to express its appreciation to the respective committees of the California State Legislature which have recognized and are considering this problem, and offer any assistance within

the power of the Association which these committees may request in order that this odious practice may be eliminated.

Your committee is of the opinion that all the important aspects of this resolution were already covered in Resolution No. 6 and that the resolution would add nothing to the policy of the Association. We therefore recommend that this resolution *do not pass*.

Mr. Speaker, I move the adoption of this section of our report.

... Whereupon a vote was taken and this section of the report was accepted. . . .

DR. HALLEY: Resolution No. 12 was introduced by Dr. Hollis L. Carey of Butte-Glenn County and is as follows:

WHEREAS, Many small hospitals are to be built in the State of California within the next few years; and

WHEREAS, The small hospital is a unique enterprise unto itself presenting many problems in design, construction and operation; and

WHEREAS, Adequate guidance is completely lacking either from the federal or state public health department; now, therefore, be it

Resolved, That a permanent file of each unit placed in operation within the past five years containing the complete history of the financing, construction, and operation, with recommendations for others in similar circumstances, be kept by the C.M.A. Committee on Rural Health and that each new unit be requested to add their history to this file.

Your committee feels this resolution defines a worthy purpose. For clarity, however, the committee proposes an amendment to the resolution by changing the last paragraph of the resolution to read:

Resolved, That the C.M.A. Committee on Rural Health be requested to establish a permanent special file on small rural hospitals. Said file would include a complete record of the planning, financing, construction, and operation of each small hospital placed in operation during the past five years as well as those placed in operation in future years. This file would also include recommendations of the planners of these institutions and would be made available to those who contemplate the undertaking of comparable projects.

Your committee recommends that the amended resolution *do pass*.

Mr. Speaker, I move the adoption of this section of our report.

SPEAKER CHARNOCK: Is there any discussion?

DR. HOLLIS L. CAREY: Since this resolution was introduced into this House, the Public Health Department, through its agencies, has contacted me in this regard, and they are now running a parallel program to this particular resolution. Since I realize well the amount of work that will be involved by

the Rural Health Committee in undertaking this particular program, it would seem that a duplication by the Rural Health Department might not be particularly wise. However, I have the feeling that this resolution has been an inspiration to the Public Health Department in its particular study of the small hospital program. I therefore believe that it would be wise to table this resolution—simply table it at the present time in such a manner that it could be brought up again if it is deemed necessary or wise by the House. I move, Mr. Speaker, that this resolution be tabled.

... Whereupon a vote was taken by a show of hands, and the motion was passed and the resolution was tabled. . . .

DR. HALLEY: Resolution No. 16 was introduced by Dr. Leon P. Fox of Santa Clara County and is as follows:

WHEREAS, The public relations program of the medical profession in California is of necessity the largest and most outstanding in the country; and

WHEREAS, Experience has shown that timing, immediate action, and efficiency are imperative and best accomplished when the public relations department works independently of the administrative offices; and

WHEREAS, The present public relations department is somewhat hamstrung by the apparent lack of a far-reaching plan and by delay of action because of channeling through the C.M.A. administrative offices; and

WHEREAS, The C.M.A. is now a large organization requiring the full time executive secretary whose duties are multiplying yearly; now, therefore, be it

Resolved, That the House of Delegates of the C.M.A. designate the public relations department as a separate entity from the executive secretary's office; and be it further

Resolved, That the public relations department be under direct supervision of a director of public relations who shall be appointed by and answerable to the Council.

The committee feels that the action requested does not fall within the province of the House of Delegates in its capacity as a legislative body, and would encroach on the administrative duties of the Council. We therefore recommend that this resolution be referred to the Council for whatever action it deems necessary.

Mr. Speaker, I move the adoption of this section of our report.

SPEAKER CHARNOCK: It has been moved that this resolution be referred to the Council, so that is a move for referral. Is there any discussion?

DR. LEON P. FOX: Just a few years ago this Association spent a considerable amount of money to establish a public relations-educational program in this state. I know we all benefited in many ways. Since then we have decided to continue the public

relations campaign of education, to the public and ourselves, and to do this on our own in our own organization. This is necessary, we believe, to inform the public of the advantages and attractions of private enterprise as compared to compulsory, or state medicine. We have set up our own bureau, which certainly is desirable. However, it has been made a subsidiary of the administrative department of our Association, and in my opinion, its activities have been continuously stifled in the background of a busy organization.

The public relations department of the C.M.A. must be a fast-moving, efficient organization with expert personnel, and it must be of cabinet stature. We have the personnel. I'm sure the efficiency can be improved by complete divorce from the executive offices. Its stature would be greatly advanced. If it offered resolutions, they should be passed. Our executive department and the staff have a tremendous task directing the business activities of this Association. The public relations department has an equal sized task to do if we are to keep the private practice of medicine in the forefront and out of the hands of either compulsory state medicine, or more acutely at present, out of the hands of profiteering lay people, putting in cut-rate medical and hospital plans throughout this state. Therefore I ask you to reject the section of the committee's report and to direct the Council to divorce the public relations department from the executive section office.

Mr. Speaker, I ask that this part of the report be rejected.

SPEAKER CHARNOCK: Are you ready for the question? Your vote is upon reference of this resolution to the Council.

VOICE: I'd like to have a clarification of the meaning of this thing. I'm in doubt of what this whole thing means. Could I ask for clarification of the meaning of this resolution and remarks made.

SPEAKER CHARNOCK: The resolution you have in printed form before you. The Reference Committee wishes to refer this matter to the Council for their action. You're voting on a motion to refer this resolution to the Council.

... Whereupon a vote was taken, and it was voted to refer this resolution to the Council. . . .

DR. HALLEY: Resolution No. 17 was introduced by Dr. Albert G. Miller of San Mateo County and is as follows:

WHEREAS, The threat of socialization and nationalization is definitely with us; and

WHEREAS, It is urgent that we further emphasize our stand against such federal trends; now, therefore, be it

Resolved, That the California Medical Association instruct its delegates to the American Medical Association to sponsor a resolution to the A.M.A. House of Delegates session condemning the type of autocracy exhibited in the recent seizure of the steel plants by the President of the United States.

Your committee refers the House to Article I, Section 2 of the Constitution which reads as follows:

"Section 2—Purposes.

"The purposes of this Association are to promote the science and art of medicine, the protection of public health, and the betterment of the medical profession; to promote similar interests of its component societies; and to unite with similar organizations in other states and territories of the United States to form the American Medical Association."

While the committee is in sympathy with the thought expressed by the author, the issue has been fairly settled by two of the highest courts in the country since its introduction. More important, however, as concerns this legislative body of the California Medical Association, we are of the opinion it is not a resolution which should be properly brought before the House and request the Speaker to declare it out of order.

Mr. Speaker, I move the adoption of this section of our report.

SPEAKER CHARNOCK: First of all, in order to get this thing straight, not only have the courts had their word, but the people have, so the Speaker will declare that resolution out of order.

DR. HALLEY: That is the conclusion of the resolutions left in committee since our last April session, and in conclusion I want to again thank you, Dr. Rosenow and Dr. Rochex, the other two members of our committee, for your help and suggestions in formulating our report. We also wish to thank all the members of the House who appeared before the committee last April, either for or against any of these resolutions. It has been a distinct pleasure on my part, and I have tried to do my best as chairman of Reference Committee No. 3. (Applause.)

Mr. Speaker, I was a little previous there. I move the adoption of our report as a whole, as amended, and in preface to this, I did put that little comment on this report that was sent out to you, which is still true, with one exception. We said the committee, in presenting this report, as directed in the By-Laws, wishes to inform the House that since adjournment, we have received not one solitary communication or comment from any delegate, except in one instance where we specifically wrote for an opinion. We make this comment merely that it may help delegates better to evaluate the importance of two sessions annually.

We wrote this report, it is true, November 1, and submitted it to the secretary of the C.M.A. for distribution to the delegates, so that was true November 1. There has been only one exception to it now, and that's on Resolution No. 3, where we had a belated appeal to us to change the wording of the resolution. It seems to me the purpose of two sessions is pretty much to get your comments as delegates, and we have had some response from the availability of your committee to hear your complaints or your desires in any way, shape, or form, and so I have appended that to the com-

mittee report. I heard there was some objection to it. I have to take a little responsibility for having written it in there myself, but that represents the facts as we have experienced as your Reference Committee No. 3.

SPEAKER CHARNOCK: It has been moved and seconded that the Report of Reference Committee No. 3, as amended, be adopted. Are you ready for the question?

... Whereupon a vote was taken and the motion to accept the report as amended was passed. . . .

SPEAKER CHARNOCK: Thank you, Dr. Halley.

... Whereupon Dr. Wilbur Bailey, Vice-Speaker of the House of Delegates, took the chair. . . .

SPEAKER WILBUR BAILEY: The next item on the agenda is the report of Reference Committee No. 4, Dr. Arthur Kirchner, chairman.

REPORT OF REFERENCE COMMITTEE No. 4

DR. ARTHUR A. KIRCHNER: Mr. Speaker, your Reference Committee No. 4 was appointed prior to the 1952 Annual Session and since that time has taken under consideration the proposed amendment to the Constitution and By-Laws presented at that session. At this time there are constitutional changes which are ready for action.

The first one is Amendment No. 2 introduced by Dr. Lyle G. Craig in the Interim Session of December of 1951, and is as follows:

Resolved, That the Constitution of the California Medical Association be amended as follows:

That in Article IV, Section 1, the first sentence be amended by deleting the word "regular" and inserting in its stead the word "annual," so that this first sentence shall read:

"At each Annual Session the House of Delegates shall by a majority vote, fix the annual dues to be paid by members of the Association for the ensuing calendar year."

The remainder of Section 1 shall be unchanged.

Your Reference Committee believes that this amendment will clarify the present wording of the section and should be adopted. The committee recommends that this amendment *do pass*, and we move the adoption of this portion of the report.

... Whereupon a vote was taken, and that portion of the report was adopted. . . .

DR. KIRCHNER: The next is Amendment No. 2(b), introduced by Dr. Lyle G. Craig on behalf of Reference Committee No. 3, Interim Session, December 1-2, 1951, and is as follows:

Resolved, That the Constitution of the California Medical Association be amended as follows:

That in Article IV, Section 5, the first sentence be amended by striking out the word "regular" and inserting in its stead the word "annual," so that the first sentence shall read:

"At each Annual Session of the House of Delegates the Council shall submit to it an itemized

budget stating the proposed expenditures of the Association for the ensuing year."

The remainder of the Section 5 shall be unchanged.

Your Reference Committee again believes that it will clarify the wording, and that the section should be adopted, and the committee recommends that it *do pass*.

Mr. Speaker, I move the adoption of this section of the report.

... Whereupon a vote was taken, and this section of the report was adopted by a two-thirds vote. . . .

DR. KIRCHNER: At the Annual Session last spring, we had Amendment No. 5, which was introduced by Dr. Dave Dozier of Sacramento County, which is as follows:

WHEREAS, Necessary costs of operation have compelled national, state, and county medical societies in many instances to raise annual dues to increasingly large figures, the total of which may amount to a considerable sum; and

WHEREAS, Many senior members of our society still in active but limited practice desire to retain regular membership in the California Medical Association rather than accept classification as retired members; and

WHEREAS, In a certain number of instances because of curtailed practice, etc., this works an undue financial hardship on these members; and

WHEREAS, As our Constitution and By-Laws are now written, there is at present no legal manner by which either the Council of the C.M.A. or the House of Delegates can grant pecuniary relief to those older members who from time to time seek assistance; now, therefore, be it

Resolved, That the By-Laws of the California Medical Association be amended as follows:

Chapter X—Funds, Assessments, etc.

Section 2.—Dues.

A third sub-section be added to read as follows:

(c) Upon proper petition, the Council shall have the right to waive all dues and assessments to any member who is known to be an honorable member of the California Medical Association and who

1. Has paid dues to the California Medical Association for a period of 35 years or more, or who

2. Has passed the age of 72 and paid dues to the California Medical Association for the preceding 20 years, or who

3. Presents satisfactory certification that he or she is at least 75 per cent disabled in the current fiscal year.

Such petition shall be in each instance accompanied by a letter of approval or endorsement by the directors of the member's local county medical society.

Your Reference Committee offered a substitute amendment to Dr. Dozier's amendment at the Annual Session, but since the substitute was ruled to

change the intent of the original, it was ruled out of order and the House voted to refer both the original and the proposed substitute back to this committee.

As a consequence the committee again went into session and we consulted at length with our legal counsel, and we are prepared to offer a new substitute, which is a By-Law amendment. For that reason, it isn't necessarily an emergency measure, because a By-Law amendment needs to lie on the table for only twenty-four hours. I would like to read to you the substitute amendment.

Resolved, That Section 3 of Chapter X of the By-Laws of this association, California Medical Association, be amended by adding to said Section 3 a new sub-section (d) reading as follows:

"(d) Those active members who have reached the age of seventy years and who have been active members in good standing of this Association for a period of at least twenty years, and who have been certified to this Association by their respective component societies to have limited their practices due to advanced age or physical disability, may be reduced to such proportion of the regular annual dues as the House of Delegates may determine, but in no event less than \$4.00."

So that said Section 3, as amended, will read as follows:

"Section 3.—Reduction of Dues.

"The House of Delegates may reduce annual dues of active members, as follows:

"(a) Those active members who have been in the practice of medicine for less than one year (on the first day of the calendar year for which such dues are payable) may be reduced to one fourth regular dues;

"(b) Those active members who have been in the practice of medicine for less than two years (on the first day of the calendar year for which such dues are payable), may be reduced to one half regular dues;

"(c) Those active members who have been in the practice of medicine for less than three years (on the first day of the calendar year for which such dues are payable), may be reduced to three fourths regular dues;

"(d) Those active members who have reached the age of seventy years and who have been active members in good standing of this Association for a period of at least twenty years, and who have been certified to this Association by their respective component societies to have limited their practices due to advanced age or physical disability, may be reduced to such proportion of the regular annual dues as the House of Delegates may determine, but in no event less than \$4, to cover a subscription to the *Journal* of the California Medical Association, and a contribution to the Benevolence Fund mandatory under existing regulations."

Mr. Speaker, I move the adoption of this amendment.

VOICE: In case later the dues were raised, we'd have to go through this all again.

SPEAKER BAILEY: No, as the Chair understands it, "in no event less than \$4.00."

VOICE: As for existing regulations, do they preclude the giving of a subscription to the *Journal* to a doctor so down in luck it's impossible for him to pay his dues, but he still wants to keep up a little bit? Is there a regulation that will prevent us, this organization, from taking care of those people by giving them the *Journal*?

SPEAKER BAILEY: I would like to have Mr. Hunton answer that.

MR. JOHN HUNTON: There is under existing postal regulations. The second-class permit of CALIFORNIA MEDICINE demands that least 50 per cent of the \$6.00 annual subscription price be received for each issue. Therefore the \$3.00 is mandatory.

SPEAKER BAILEY: We will now vote on the amendment.

. . . Whereupon a vote was taken and the amendment was passed. . . .

SPEAKER BAILEY: We now go back to the original motion. Is there any discussion?

VOICE: If this were passed, does it mean that at one time Council delegates would pass on the amount which would cover all categories, or does it mean that each time someone applies for this consideration, it would be brought to the House of Delegates individually?

SPEAKER BAILEY: At the moment the Chair believes these things go to Council regularly, and unless the Chair is mistaken, that would be the proper procedure in the future.

DR. KIRCHNER: These would be referred by component medical societies for the Council's consideration.

VOICE: Council, or Council delegates?

DR. KIRCHNER: The House of Delegates would fix the dues, but the question is whether they should be cut.

VOICE: It seems to me it's an inflexible situation that could be handled in a different way—by simply using the formula of one-half of the subscription rate, plus the minimum requirement for benevolence without making it a specific number of dollars, because we may find the price of the subscription will go down to \$2.00, and then we would have to collect \$4.00.

SPEAKER BAILEY: Will you please give that in the form of an amendment. Will you state it again so we're absolutely sure and will you take it, Mr. Secretary, so we're clear about it.

VOICE: I move this amendment to the present resolution; that in place of "in no event less than \$4.00," that in essence this shall read "that it may be reduced to such proportion of the regular rate of annual dues as represents the minimum requirement for subscription to CALIFORNIA MEDICINE, or

whatever the magazine may be called, plus the minimum requirements for the Benevolence Fund."

DR. KIRCHNER: I would like to rise to accept that amendment in place of the one I read.

SPEAKER BAILEY: This is a situation which requires laying over, and therefore if you would choose to amend, at this particular time it is out of order, but would have to lie over, according to our legal counsel. That could be done, of course, by simply putting it down. Therefore we'll go back to our original order of business.

DR. DAVE DOZIER: First of all I want to thank the committee for its courteous and sincere work on the amendment. This is not a tremendously important thing. It's for a few of our unfortunate members whom we might graciously help, and I certainly want to thank Dr. Kirchner for what he has done on this. Just one point in the amendment as proposed by the committee: It is stated "and who have been certified to this Association due to advanced age or physical disability." Then, as the committee has written, it says "due to advanced age, and who have been certified to this Association by the respective component societies to have limited practice due to advanced age." That, and following the 70 years above, would preclude the man of 45 who has polio, lying in a bed, able to carry on some sort of a bedside practice. As a point of information, I think there should be a final "or" in there, or am I in error?

SPEAKER BAILEY: Do you wish to make that an amendment?

DR. DOZIER: Well, if this proposal as stated does not preclude reducing dues for a man 45 years of age and three-quarters disabled, I'd have no desire to make an amendment, but as I read it, it seems a bit confused.

SPEAKER BAILEY: Dr. Teall, do you wish to speak on this?

DR. RALPH TEALL: I'd like to suggest that whenever the situation occurs, we include the phrase "may be done upon application of the member involved." I move this be amended that it "may be done upon application of the member involved," so that it becomes obvious that he initiates the proceeding.

The second matter is the matter of the House of Delegates reducing the annual dues in each case, and I wonder if it's not possible to delegate that authority to the Council, so that we're not bogged down with two or three little cases each year in our delegate proceedings. I therefore move this be amended by adding the words "upon application of the member concerned," and by changing the authority for reducing annual dues of active members from the House of Delegates to the Council.

SPEAKER BAILEY: Dr. Teall, we will have to divide that up. We'll vote first on the amendment "upon application of the member involved."

. . . Whereupon a vote was taken and the amendment was passed. . . .

SPEAKER BAILEY: Now, Dr. Teall, your second motion, please.

DR. TEALL: I move that the Council of the California Medical Association be substituted for the House of Delegates as the authority that may reduce the annual dues. That occurs at the bottom of Section 3 and the last line of the resolution.

SPEAKER BAILEY: That changes the sense, so what does our Legal Counsel think.

MR. HOWARD HASSARD: You have the Council fixing dues, and the Constitution specifies that the annual dues for all classes of membership are fixed annually by this House. The amendment as drafted provides that the House, in fixing annual dues each year, may fix dues for this category at a reduced rate. Then individual applications under it are passed upon by the Council, but the dues themselves are fixed by the House.

DR. TEALL: I'll be happy to withdraw my motion.

DR. HALLEY: We all recognize the great value of the C.M.A. Journal, but when one becomes retired, is it necessary that we have to charge them \$3.00 for the magazine? Why don't we just not give them the magazine at all?

SPEAKER BAILEY: A point of information. I think we had that explained that it's a matter of postal regulations.

DR. KIRCHNER: I think it's been stated it's mandatory we make some charge, whether you want to say \$4.00 or whatever the House desires.

SPEAKER BAILEY: May I add by way of information, these are active members. They haven't gone clear down to where they can't read yet, we hope. Unless you care to make an amendment, it will stand that way.

VOICE: It seems to me there has been enough confusion created in the last fifteen minutes that this amendment should be returned to the committee for rewriting and resubmission.

SPEAKER BAILEY: Is there a second to return to committee, which takes precedence. Any discussion on the move to return to committee? Are you ready for the question?

... Whereupon a vote was taken and it was voted that the matter be returned to committee. ...

DR. KIRCHNER: We'll be with you again. (Laughter.)

Mr. Speaker, I move the adoption of this report as amended.

... Whereupon there was a vote, and it was decided to accept the report as a whole as amended. ...

... Whereupon Dr. Charnock resumed the chair. ...

SPEAKER CHARNOCK: At this time we will recess the House of Delegates and turn the meeting over to the Committee on Scientific Work. Dr. Albert C. Daniels, chairman.

DR. ALBERT C. DANIELS: Last year the Committee on Scientific Work arranged a program for the Interim Session in which Dr. Hinshaw and Dr. Shaw

participated. This year we have been fortunate in getting two doctors to discuss the subject of "Burns." The first half of this program will be today. The second half will be at approximately this same time tomorrow.

Dr. Hopper, who is assistant professor of medicine at the University of California School of Medicine and director of the clinical laboratory, will be our speaker for today. Colonel William A. Todd, chief of surgical service at Letterman Army Hospital, will be the speaker tomorrow.

At this time I take pleasure in introducing Dr. James Hopper, Jr., who will talk on "Fluid and Electrolyte Problems Relating to Burns."

... Whereupon Dr. Hopper delivered his address. ...

DR. DANIELS: We certainly want to thank you very much, Dr. Hopper, for an extremely interesting presentation.

... Whereupon the meeting was adjourned at 12:10 p.m. ...

Saturday Afternoon Session

... Whereupon the meeting was called to order by Dr. Charnock at 1:43 p.m. ...

SPEAKER CHARNOCK: The first order of business for this afternoon is the report of the C.P.S. Study Committee, and the chairman of this committee, Dr. Wilbur Bailey, will be the first to outline the program.

[EDITOR'S NOTE: *The complete report of the C.P.S. Study Committee was printed on pages 69 to 79 of the January, 1953, issue of CALIFORNIA MEDICINE.*]

... Whereupon a recess was declared at 2:55 p.m. ...

... Whereupon the meeting was reconvened at 3:10 p.m., with Dr. Wilbur Bailey assuming the chair. ...

SPEAKER BAILEY: The House will be in order. We are now reconvened as the House of Delegates of the California Physicians' Service. If you pass some of the recommendations that the committee has just put before you, this will never happen again. In other words, there won't be two Houses of Delegates.

In the meantime, if there be no objections, I shall ask that the roll call of the C.M.A. House of Delegates be received for the C.P.S. House of Delegates. I hear no objections. It is so ordered.

Next on the agenda is the report of the President of the C.P.S., Dr. Donald Cass.

REPORT OF PRESIDENT OF C.P.S., DONALD CASS

DR. DONALD CASS: Members of the House of Delegates of C.P.S., I would like to say before I start my report that I would like to take a little time and have all of you get a copy of it, because my report is entirely factual. You can follow along, because C.P.S. has tried very hard to carry out the recommendations of the Study Committee in detail.

So if you will follow along, you will more fully understand the work that the Board of Trustees has been doing in trying to carry out the recommendations of your Study Committee.

"This nation is on the threshold of a new era in the growth and expansion of health services," said one speaker appearing before the President's Commission on the Health Needs of the Nation.

As California pioneered in the field of prepaid care, so is California feeling the effects of the changes which provide the opportunity for the non-profit service organization controlled by the medical profession to find its rightful position in this rapidly expanding field.

To those working in this field, there are day-to-day evidences of change. People are becoming realistic. They are discovering that the utopian dreams of certain leaders are not possible or practical—that no insurance company or service organization can supply full and complete coverage at reasonable costs. They are learning of the necessary limitations and restrictions—that complete coverage is costly—that such coverage is costly—that such coverage does not always give them the protection needed on major illnesses.

Many insurance companies are finding that their venture into this field is costly. Some are raising rates substantially. Others are restricting the number of new policies written. The differential between the rates of insurance companies and those of C.P.S. is narrowing.

The honeymoon of labor union leaders, wherein members were promised everything, to be paid for by the employer, is passing. Employers, with rising costs and narrowing profits, are giving much more thought to the cost of "fringe benefits," of which prepaid medical care is one. The coverage written in the future will come nearer to the needs of people rather than what their leaders say they need.

The full impact of the payment for medical, surgical, and hospital care by other than patients (such as county, state, and federal government, employer and others) is only now being understood. It is estimated that 42 per cent of all medical care is now paid for by someone other than the patient.

With the increasing cost of both hospital and medical care, all interested are finding that many indemnification policies cover little more than 50 per cent of the cost of the hospital, drug, and physician's bills. Interest in such indemnity policies is waning; interest in more adequate coverage is increasing.

Individuals using hospital and medical care still prefer the free choice of doctors, but younger people, and those not yet having extensive experience with medical care, respond to the lure of the "one stop" service of the closed panel groups.

Management, labor leaders, individuals and doctors are mindful of the rapidly increasing cost of hospital and medical care, and all are looking for a method that will give the greatest benefits at the lowest cost.

In these troubled times, the rededication of the doctor to the service of the sick is reassuring and heartening to the public, and the decision of the medical profession, speaking through this House of Delegates and the C.M.A. Study Committee, to maintain a strong Blue Shield-C.P.S. organization, so organized as to best serve patients and doctors, is creating new interest in the operation of this Blue Shield Plan.

The activities of the A. F. of L. group in San Francisco in proposing a health center for members of its various unions, is indicative of the desire of union leaders to increase their power and control in this field.

Fully realizing that the changes outlined, as well as many more not mentioned, call for a reorganizing and overhauling of the contract benefits offered by C.P.S. . . . methods of working with doctors and of paying them for their services . . . business operating methods and personnel of Blue Shield-C.P.S. . . . all call for an adjustment to the changing times.

The C.P.S. Board of Trustees recognized this need in the spring of 1951. The medical profession, through organized medicine, appointed its Study Committee in the fall of the same year, and improvements, betterments, and changes have been developed that should be briefly reported to you today.

THE CONTRIBUTION OF THE C.M.A. STUDY COMMITTEE

The report given by this committee at the annual meeting of C.M.A. in April of 1952 made certain recommendations as to the objectives of C.P.S. . . . other recommendations as to the scope of service to be rendered . . . and more detailed suggestions as to ways and means of better serving the doctors of this state.

Following the annual meeting, certain steps were taken by the Board of Trustees to activate these suggested changes, and a portion of this report will be devoted to steps taken to carry out these suggestions.

Multiplicity of Contracts and Contract Simplification: In analyzing C.P.S. contracts covering beneficiary members, the C.M.A. Study Committee recommended that the number of contracts be reduced to a small number of basic contracts, and that the benefits of all contracts be standardized and made as uniform as the offerings of competitors permitted.

Two administrative Contract Committees were appointed . . . one in Southern California and one in Northern California. These two committees worked independently, pooled their ideas, and presented them to the Board Contract Committee for consideration and approval.

In analyzing all C.P.S. contracts, it was apparent that simplification could be achieved in two ways . . . first, through changes in contract administration and, second, by revision of the contracts themselves.

During the early fall months, the Board Contract Committee secured approval of the Trustees for eleven administrative changes. These changes have reduced the number of waiting periods in contracts from five to two and unified allowances and exclusions, with particular reference to occupations, maternity operations, injuries, and in-patient laboratory benefits. Even more far reaching adjustments have coordinated the benefits of the medical-while-hospitalized contract with the two-visit deductible and hospital contracts.

It is fully realized that the benefits under C.P.S. contracts form the basis of service to both beneficiary and doctor members. The committee has made an analytical study of contracts now being offered competitively by both national and other organizations proposing to establish voluntary plans on an area basis.

In addition, this committee, working with the sales department, studied the needs of groups not now covered by some form of prepaid care, with the result that C.P.S. has extended group coverage to families of employees who alone have health protection through compulsory, company-operated plans. Such plans have long been operated by the railroads and by certain oil companies, with no provision for dependent coverage.

I'll digress for a moment there and tell you that a great many of these so-called successful insurance prepaid medical and hospital care plans have no provision whatsoever for the dependents of their employees. The premium charged the employee is deducted from the paycheck, so he has no choice but to join. That leaves this large group of dependents of working people, employed people, who are available to C.P.S. coverage—the wives and children and dependent relatives—so that C.P.S. now is enrolling these dependents, so that it's a very popular form of contract, and something that is comparatively new to C.P.S. and opens a new field for our endeavors.

In order that C.P.S. might be competitive in soliciting groups of one hundred or more, the Trustees approved a recommendation of the sales department, the Administrative Contract Committees, and the Board Contract Committee that C.P.S. rates be increased to groups where such increase was necessary, to the end that commissions might be paid to insurance brokers for the services rendered by these brokers in negotiating contracts with large groups, including labor unions. The payment of commissions to brokers is guarded by administrative restrictions and continuous audit.

I'll digress again here and say that one of the greater stumbling blocks to selling C.P.S. is that we've never had brokers. Practically all insurance is written through brokers, and that's where the so-called package plan of death benefits, retirement benefits, life insurance, medical and hospital insurance, cash benefits for disability, all lumped together in a package, will be handled through one broker, who in turn sorts them out and arranges for pay-

ment on a single payment basis. C.P.S. now has arranged that some of our contracts will have an increased premium to pay the broker; that is, C.P.S. will still be able to operate under the administrative percentage, even though a broker gets part of the premium. Whenever a broker gets part of our contract, his fee will be charged to the insured.

I don't know whether you all know that, but it is very difficult to sell insurance directly. It's like selling automobiles without an agency, selling direct from the factory. It's very tough, and we feel that letting brokers in on this will enlarge our sales field tremendously.

The development of new C.P.S. basic contracts has proceeded through analytical study of contracts of competitors, C.P.S. experience, and the expressed requirements of those groups whose leaders have studied the needs of the members of their groups.

Preliminary revision of C.P.S. group contracts for hospital, surgical, and medical-while-hospitalized coverage has been drafted, crystallizing administration thought with respect to both contract wording and contract benefits.

Should this House of Delegates approve the recommendations of the Study Committee relative to a basic change in contract benefits on a trial basis, it still is essential that present C.P.S. contracts be kept up to date and competitive, and it is, therefore, proposed to continue the revisions and changes already under consideration.

Method of Payment and Imperfect Communication: Following the annual meeting, an Advisory Committee of C.P.S. executives, but also including Messrs. Waterson, Hassard and Hamman, was appointed to work out the details of the recommendations of the Study Committee as they affect the payment to doctors and imperfect communication. Following are the decisions reached and the steps taken:

Consideration was given to three different methods of notifying members of benefits received, including (1) sending a check payable to the patient and the doctor; (2) sending a copy of the billing form to the patient, with the diagnosis not shown; and (3) sending a card or letter to the patient describing the benefits received.

After reaching a decision to use a notification card or letter, the first test was made in Butte-Glenn County, where there are approximately 6,500 beneficiary members of C.P.S., with 95 per cent of the physicians as C.P.S. members.

With minor changes, the same program was further tested in San Joaquin and San Diego counties, and will later be tried statewide.

Each test was made with the understanding and cooperation of the County Medical Society, and the degree of success is measured by the expressed satisfaction of doctors and patients.

When the decentralized experimental program was started in San Jose, C.P.S. office took over the responsibility of notifying patients of rejected claims, and the reasons therefor.

I'll stop for a minute and tell you now that as President of C.P.S., my mail is terrific, and none of it very sweet. The bulk of the complaints are from doctors who object to telling their patient that C.P.S. is not going to pay their bill. They are sorry; they try to explain why. We're going to notify the patient ourselves so he'll know before the doctor has to tell him, and in San Jose it's worked out very well, because it's cut down the number of complaints from doctors to almost zero.

This method of handling rejected claims relieved the doctor and his office nurse or secretary of the responsibility of explaining the "whys" and "wherefores" of rejected claims, and made it unnecessary for the doctor to be defensive regarding C.P.S.

In San Jose, the patient is notified of a claim rejection by telephone where possible, and by letter where the patient has no telephone.

A similar notification program was started in Alameda County on August 13, 1952, where it has been found that the percentage of members reached by telephone was smaller than in Santa Clara County.

C.P.S. is now testing a program of notification by correspondence *only* in both Alameda and Santa Barbara counties, using a new letter which correlates the ideas of the committee and Dr. Dichter. A sales folder, describing the benefits to which the member is *not* entitled, is included. This folder also points out the benefits to which the members *is* entitled, regardless of the rejection of this one claim.

When each of these experimental plans has been used sufficiently long to draw definite conclusions as to the degree of success of each, the best in each program will be incorporated into a statewide plan and put into operation in each county where the county society assures acceptance and cooperation.

MANAGEMENT OF C.P.S.

As changes were being made in the method of operating C.P.S., so changes have been and are being made in the method of controlling and managing the plan. The various standing committees of C.P.S., under the leadership of the different chairmen, have undertaken added responsibilities. A different staff member of C.P.S. has been appointed secretary of each committee. Thus committee members have been brought closer to C.P.S. operations, and the members of C.P.S. administration have come to better understand policies developed by those committees and the Board of Trustees. Under the leadership of Executive Director Bowman, assistant directors have been appointed as managers of the Los Angeles and San Francisco offices, with full management responsibilities.

As the number of beneficiary members has dropped, the number of employees has decreased. This made necessary other management changes to provide for continued efficient operation. Additional changes are planned, and will be made as rapidly as the organization can make adjustments to these changes.

In the early fall of 1951, plans were made for an experimental decentralized C.P.S. operation in San Jose. Already having an office in San Jose, it was necessary only to expand the force by three people.

To be successful, it was concluded that the *plan* must be right, the cooperation of the physicians and the medical society must be assured, and a manager with claims and sales experience must be placed in charge.

The majority of claims originating in this territory are now processed in San Jose. Unusual claims are examined by a committee of doctors, without having the name of either patient or doctor involved.

Many of you have served on our County Medical Society Committees, and we find that after operating a short period of time, the committee finds that one of the most beloved and respected members of the society is up for criticism before the committee, and the whole action falls away. Now if they don't know who it is, the claims are handled in a much more orderly fashion.

Where claims are rejected, the patient is contacted by telephone or letter *before* the claim is returned to the doctor. Thus, the doctor and his nurse or secretary are relieved of the responsibility of explaining to the patient the reason for rejection of the claim. This one step alone has greatly improved physician relations in this area.

It is planned to extend this decentralization program, with the hope that California will be divided into a number of zones, with member and doctor contact carried as close to the problem as is practical.

TRENDS IN C.P.S. MEMBERSHIP AND INCOME

The membership in C.P.S. reached a peak of 1,029,048 in December, 1950, and since that date membership has been declining. This drop in membership is due to many causes, the most important of which is the dissolution of the arrangement with Blue Cross in Southern California. As of October 31, 1952, the total membership in C.P.S. was 662,818, or a decrease of 34.58 per cent from the peak.

While membership is still decreasing, the number of new members in Northern California, and of southern independent members has been on the increase, so that the net decline is at a much slower rate.

The present objective is to increase C.P.S. membership to 950,000. Effort is being made by the sales department to add such groups as are possible under present restrictions; and to remove these obstacles wherever possible. Recently an advertising program was started for the express purpose of developing inquiries, and it is thus hoped to keep C.P.S. in a strong position of influence.

May I ask that if you see a great big blue sign on the corner and then you drive around a week or so later and see another one like it, don't take it for granted we're spending \$250.00 a month on each sign. It's the same sign. We put it in one spot for a

while. We had it at Wilshire and Crenshaw for a while, and then at La Brea and Jefferson, and I had many complaints, and doctors stated: "No wonder the fees are small. You're spending all your dough on advertising." (Laughter.)

While the membership in this period decreased, the income from membership dues for the 12 months ending September 20, 1952 decreased but 4.15 per cent. You remember we increased the premium rates, and the full effect of that increase is still being felt, so that even though we had a loss of 34 per cent of our members, our income has only dropped 4.15 per cent. This small percentage of decrease resulted from an increase in members' dues in 1951.

Every effort has been made by the Finance Committee and the administration to keep administrative expenses under control, with the result that as income declined, so has expense, and the percentage of administrative expense to income has remained constant. The administrative expense for the 12 months ending October 31, 1952 was 14.92 per cent, as compared with 14.29 per cent for the 12 months ending October 31, 1951.

That is a great compliment to our administration, because, with a decrease in membership, it becomes necessary to cut down your employee force and in our case, it isn't only enough to stop rehiring, but you have to get rid of some of our old-time, trusted employees. We have done this, and our administrative percentage of our income has remained constant. I think the administration deserves a great deal of praise for being able to do that.

Under this plan of operation, C.P.S. finances have continued in a sound condition. C.P.S. continues to pay 100 per cent of the fee schedule, and reserves are adequate to pay 100 per cent of the fee schedule during the heavy utilization months of January to May.

Additional financial information is available from the folder containing both the operating statement and asset and liability statement for California Physicians' Service distributed to each member of the House of Delegates. I believe that will be available to you after this meeting.

I want to say just a word about the national Blue Shield organization. I don't know whether you realize that California Physicians' Service has supplied to various Blue Shield plans throughout the country a large number of administrators trained in our own Blue Shield factories. We participate there actively. "Hap" Hassard is attorney for that group, has written the insurance contract, and he continues to attend all their meetings, and is legal counsel for Blue Shield on a national plan. I have been Blue Shield Commissioner from this District, and have gone to Honolulu for the past five or six years, and have attended practically all the meetings myself. The national movement is a very healthy movement.

NATIONAL BLUE SHIELD COMMISSION

The Blue Shield Commission reports a nationwide increase in Blue Shield membership from the

22,000,000 reported to you at the House of Delegates meeting in April, to approximately 25,000,000. Growth of Blue Shield service plans is nationwide, at the rate of approximately 4,000,000 per year.

Since the last report, the Blue Shield Commission has continued its negotiations with the Blue Cross Commission for a joint operating agreement at the national level for the coverage of so-called "national accounts" that have employee groups located in two or more states.

Dr. Charles Hayden of Massachusetts represented Blue Shield at the panel discussions before the President's Health Commission, and presented to the commission the basic reasons for the medical profession's sponsorship of prepaid medical plans. He also pointed out that the loud cries for "comprehensive" medical care are not in the public's interest nor in the profession's interest, and that it is impossible for government or anyone else to regiment medical care without destroying its quality.

The Blue Shield plans, of which there are now 78, cover practically every area in the United States, and they are enjoying a steady and healthy growth.

RELATION WITH C.M.A. STUDY COMMITTEE

Since the Study Committee made its preliminary report to the House of Delegates in April of this year, every effort has been made to incorporate as many of the suggestions as possible in C.P.S. operations.

One joint meeting of the Study Committee and the C.P.S. Board of Trustees was held, and numerous meetings have been held with Mr. Rollen Waterson, the secretary of the committee, and with individual members of the committee.

It is believed that both the members of the Study Committee and the members of the C.P.S. Board of Trustees have come to better understand the basic problems of prepaid medical care in this changing world.

Full recognition should be given to the Study Committee and all its suggestions have been constructive and carefully considered. While the changes necessary to carry these suggestions into effect have not always been immediately apparent, nevertheless there was full agreement on the result to be secured.

CONTRIBUTION OF COMMITTEE AND BOARD MEMBERS

During this fall period, the committees—Contract, Finance, Medical Policy, Veterans Administration, etc.—have been active, and the contributions important.

The Board of Trustees, too, has seriously considered and acted on many of the problems confronting C.P.S. and made acute by aggressive competition. The contribution of many of the members has been of the greatest value.

I'm going to say a little something about something not in the report; that is, veterans' care in California.

You all know that a veteran who has a service-connected disability may receive care for his dis-

ability from his family doctor if he receives an order from the Veterans Administration. The C.P.S. plan is copied all over the country, but the Veterans Administration has been closer to cooperation with C.P.S. than any other of these plans, I think mainly because we offer service and a fee schedule.

Our income from service treatment, or service-connected disabilities in this state runs to over \$1,000,000 a year. That goes to doctors. If we didn't have C.P.S., or some other organization, that \$1,000,000 worth of treatment in doctors' offices would be done in out-patient clinics in Veterans' Administration.

That's something that formed the bulk of the discussion at the A.M.A. convention in Denver the first part of this week. Other matters under discussion were the Doctor Draft Law, and the care of non-service-connected disabilities of veterans, and the care of civilian dependents of men in the service. I think right now that C.P.S., with the other Blue Shield and Blue Cross plans, is the only effective agent that can do this as we're doing it. It was the opinion of the A.M.A. and, strange as it seems, concurred in by the representative of the American Legion and the Veterans Administration, that the only persons that the government should care for medically were those in military service, those disabled by service, the Indians, and the sailors (those in the Federal Maritime Service); and indigent veterans with non-service-connected disabilities of a chronic nature. They mentioned specifically tuberculosis, psychiatric and neurological diseases which were to carry more than 90 days of hospitalization, which should be rightfully cared for in federal hospitals because of there being no other place to put them, but that eliminates the care of non-service-connected disabilities from those who are able to pay. Now it seems like a pipe-dream to think we can get those services away from the government, but the American Legion said they're willing to help us change. The pauper's oath doesn't mean a thing; just encourages dishonesty on the part of the veteran. You know the veteran only has to say "he thinks he's unable to pay." If he signs a little oath on the application for care in the Veterans Administration and says "he thinks he's unable to pay," there is no one who can force him and say that he's guilty of perjury. Congress on two or three different occasions has refused to let anyone investigate this little pauper's oath.

Now as I say again, C.P.S. has the acceptance of the Veterans Administration better than any other organization in any state, and they pay the biggest fees here.

In conclusion, as physician and beneficiary members have come to better understand and appreciate Blue Shield—C.P.S.—as a result of a year of investigation and analysis by the C.M.A. Study Committee in the field of prepaid care, including C.P.S., has been reported—with organizational and other improvements being made in the management of C.P.S., and with the making of additional changes too

numerous to list, it is believed that the future offers an even greater opportunity to broaden and improve the service of C.P.S. to beneficiary and physician members.

The Board of Trustees is determined to so improve C.P.S. operations and to broaden and extend the service rendered, and then to take full advantage of the opportunities offered. (Applause.)

DR. BAILEY: Thank you, Dr. Cass.

Next on the agenda are C.P.S. resolutions. Are there any resolutions?

DR. GRAESER: Mr. Speaker, the two resolutions I have to present to the House of Delegates are resolutions to carry out some of the recommendations of the C.M.A. Study Committee. The first one is an amendment to the By-Laws of C.P.S.

C.P.S. RESOLUTIONS

WHEREAS, The C.P.S. Study Committee of the California Medical Association has recommended that the House of Delegates of the California Medical Association perform its functions as the California Medical Association House of Delegates and C.P.S. Administrative Members simultaneously, in lieu of separately, and that the Council of the California Medical Association function as the Nominating Committee for members of the Board of Trustees of C.P.S.; and

WHEREAS, In order to implement the foregoing recommendations of the C.P.S. Study Committee, it is necessary to amend various sections of the By-Laws of C.P.S.; now, therefore, be it

Resolved, That Subdivision (c) of Section 3 of Chapter II of the By-Laws be and the same is hereby repealed; and, be it further

Resolved, That paragraph (3) of Subdivision (a) of Section 6 of Chapter II of said By-Laws be and the same is hereby repealed; and, be it further

Resolved, That Section 13 of Chapter V of said By-Laws is hereby amended to read as follows:

"Sec. 13—*Nomination and Election of Trustees*. At least thirty days prior to each annual meeting of Administrative Members (House of Delegates) the Council of the California Medical Association shall select nominees with respect to existing vacancies on the Board of Trustees and vacancies to occur at the forthcoming annual meeting. The Council may submit as many candidates for each vacant office or office to become vacant as it sees fit. Such nominations shall be transmitted to the Speaker of the House of Delegates of the California Medical Association, who shall immediately transmit the list of nominees to the Administrative Members (Delegates and Alternates) for their consideration prior to the commencement of the annual meeting. At the second session of the annual meeting, the Administrative Members (House of Delegates) shall by ballot elect a trustee to fill each vacancy then existing on the Board of Trustees. Nothing herein contained shall prevent nominations from the floor, after the report

of the Council of the California Medical Association, acting as a Nominating Committee, has been received." And be it further

Resolved, That Section 14 of Chapter V of said By-Laws is hereby amended to read:

"Sec. 14—*Resolutions introduced at annual or special meetings: Reference Committees:* At each annual or special meeting of Administrative Members (House of Delegates) resolutions may be introduced in the manner and at the times permitted or required in the By-Laws of the California Medical Association, and for the purpose of governing procedure of introduction, references to committee, time of action, and voting requirements with respect to resolutions the provisions of Chapter V of the By-Laws of the California Medical Association are hereby incorporated herein and made a part hereof for all purposes." And be it further

Resolved, That Section 15 is hereby added to Chapter V of the By-Laws, to read as follows:

Sec. 15—*Administrative Members Meetings: Presiding Officer:* At each meeting of the Administrative Members (House of Delegates), whether annual or special, the Speaker of the House of Delegates of the California Medical Association shall preside. In his absence, the Vice-Speaker of the House of Delegates of the California Medical Association shall preside."

The other resolution is as follows:

Resolved, That the Board of Trustees shall proceed to form a wholly owned disability insurance company for the purposes set forth in and as recommended by the report of the C.P.S. Study Committee of the California Medical Association.

DR. BAILEY: Thank you, Dr. Graeser. These will go directly to Dr. Teall's committee for reference purposes. Are there any further resolutions for C.P.S.?

I hear none. We shall then recess until we meet tomorrow.

We shall now reconvene as the House of Delegates of the California Medical Association.

... Whereupon Dr. Charnock resumed the chair as Speaker. ...

SPEAKER CHARNOCK: Before we go on with our business, I would like you to meet two young gentlemen from the University of California, Mr. George Herwitz and Mr. Lee Smith, who are members of our Junior A.M.A. at the University of California.

... Whereupon Mr. Herwitz and Mr. Smith appeared at the rostrum and were applauded by the delegates. ...

SPEAKER CHARNOCK: Mr. Stephen Plank, another one of the young men at the University of California School of Medicine, is the one going to Chicago to represent that institution in the Student A.M.A.

We will now proceed with the next item on our agenda, the introduction of resolutions and amendments. May I remind you that according to Chapter V, Section (7), Paragraph (c), of the By-Laws, in

introducing resolutions, if the introducer designates a resolution as an emergency measure or resolution, it will be acted upon at this session. It will require a two-thirds vote. The introducer of that resolution must accept that two-thirds vote and attain that in order to get the passage of his resolution. Otherwise, it will be just by majority vote, but will be over for the next session.

We will now accept Resolutions or Amendments.

RESOLUTIONS AND AMENDMENTS

DR. SIDNEY J. SHIPMAN: This is a proposed amendment to the By-Laws creating judicial councils in the larger county societies to handle disciplinary hearings. These were submitted to the Council, and the Council has already acted. I am going to read them. There are two separate sets of amendments. One is applicable to the county society of 200 or more members, and the other is applicable to the larger societies—Los Angeles, San Francisco, Alameda-Contra Costa, and San Diego.

The first one is as follows:

Section 1 of Chapter III of the By-Laws of the California Medical Association is hereby amended as follows:

A. Subparagraph (1) is amended to read:

"(1) *Charges: Formal Requirements: A Formal Charge Must First Be Made.* Such charge must be in writing, signed by the accuser, and if made by a person other than a member of the Society must be sworn to before an officer of the State of California authorized to administer oaths. Charges must state the acts or conduct complained of with reasonable particularity. Charges must be filed with the secretary of the accused member's component society."

B. Subparagraph (2) is amended to read:

"(2) *Creation of Judicial Councils: Secretary's Duties; Preparation of Charges to Judicial Council.*

"(a) There is hereby created, in each component society having more than 500 active members, a Judicial Council consisting of not less than five active members of the society. Appointments to the Judicial Council shall be made by the governing board of each such component society, and determination of the number of members of the Council, within the limits herein specified, shall be made by the governing board. Terms of office of the Judicial Council in each such component society shall be three years, except that upon the initial appointment the governing board of each component society shall divide the appointments as nearly equal as possible into terms of one, two and three years. Each component society having more than 1000 active members may, in its discretion, divide its Judicial Council into two or more divisions, and each division may separately hear and decide all cases referred to it. If a society has two or more divisions of its Judicial Council, the secretary of the society shall assign charges to one division or the other immediately after receipt of same, on either a rotating or geographical basis.

"(b) In each component society of 500 or less active members, its governing board (whether called Council, Board of Trustees, Board of Directors, Executive Committee, or other name) shall perform all the functions of and act as the Judicial Council. If a component society of 500 or less active members has no governing board, then there is hereby created in each such society a Judicial Council of three members, to be appointed in the manner and to serve for the term specified with respect to component societies of over 500 members.

"(c) When charges of unprofessional conduct are filed with the secretary of a component society, he shall as soon as possible present them to the Judicial Council. The Judicial Council shall, within thirty days after presentation of charges, consider the charges as presented, and in its discretion determine whether or not further proceedings shall be conducted. If the Judicial Council determines that no further action be taken, the charges shall be dismissed.

"(d) Each Judicial Council shall select its own chairman, and meetings shall be held at the call of the chairman on at least forty-eight hours notice; provided that the Judicial Council must meet not more than thirty days after receipt by the secretary of written charges against any member of the society."

C. Subparagraphs 3, 4, 5, 6, 7, 8, 9, and 10 are hereby amended by deleting the words "Board of Directors" in all instances in which said words appear in any of said paragraphs, and inserting in lieu thereof the words "Judicial Council."

Now the other I won't read. It is simply a duplicate of what I've just read to you, with the exception that in B, paragraph (a), instead of 500, the figure 200 is inserted.

SPEAKER CHARNOCK: These amendments will be submitted to Reference Committee No. 4, and I'll remind you that By-Laws may be passed at this session but, of course, require a two-thirds vote.

VOICE: Are these amendments alternates, of which either is to be adopted, or are they consistent so that both may be adopted?

DR. SHIPMAN: They are alternate.

DR. ROBERTSON WARD: This is a change in the By-Laws.

Resolved: That Section 7 of Chapter V of the By-Laws be amended by adding the following new sub-section (d) thereto:

"(d) Prior to the Annual Session in each year the Council may, by a two-thirds majority vote, elect to cancel the Interim Session for such year in which event all resolutions and new business introduced at the Annual Session may be acted upon thereat and sub-section (c) above shall not apply."

SPEAKER CHARNOCK: This will be referred to Reference Committee No. 4.

DR. GRAESER: I have a resolution here which was prepared by the physician and dentist veterans of

Alameda-Contra Costa County for action at this session as an emergency.

WHEREAS, Public Law 779, which pertains to the provisions under which Doctors of Medicine and Dentistry will be selected for service in the armed forces of the United States, will be considered for revision by the United States Congress in July of 1953; and

WHEREAS, The equitable selection of medical personnel for the armed services is a matter of great concern to the public and the medical profession; and

WHEREAS, Such selection should be carried out in such a manner as to cause the least possible hardship to the civilian community, to doctors who have already served their country in the military services and to doctors whose physical condition or other circumstance must be considered; and

WHEREAS, The proper and productive use of medical and dental military personnel is of vital concern to the public, the military services, and the medical profession; now, therefore be it

Resolved, That the Council of the California Medical Association be instructed to urge and expedite revision of Public Law 779 in accordance with the following principles:

1. (Registration) That all physicians and dentists should be required to register within a period of thirty days after they have received the degree of Doctor of Medicine or Doctor of Dental Surgery or Doctor of Dental Medicine from any school, college, or university or similar institution of learning, or within three days following the first State Board Examiners examination of the state in which the doctor or dentist intends to practice, or within a period of thirty days after they have been discharged or released from active duty from the Army, Air Force, Navy, Marine Corps, Coast Guard, or U. S. Public Health Service, if previously exempted from registration because of any provision of law heretofore in effect. The President should be authorized to require a special registration of all doctors or dentists who have not attained the 51st anniversary of the date of their birth, but who have been previously exempt from registration under any provision of law heretofore in effect by reason of their membership in a reserve component of the Armed Forces.

2. (Length of Service) That physicians and dentists should be liable for induction not to exceed thirty months of service in the Armed Forces. In computing this period of service, credit should be given for all active service previously performed in the Army, Air Force, Navy, Marine Corps, Coast Guard, or U. S. Public Health Service, except that no credit should be given for active duty performed for training purposes with the exception of reservists in divisions.

3. (Order of Induction) That, insofar as practicable, physicians and dentists should be inducted in the following order of priority:

(a) Graduating physicians and dentists who have had no active service in the Army, Air Force, Navy, Marine Corps, Coast Guard, or U. S. Public Health Service, either as dental or medical officers or otherwise.

(b) Practicing physicians and dentists who have had no active service in the Army, Air Force, Navy, Marine Corps, Coast Guard, or U. S. Public Health Service, either as medical or dental officers or otherwise.

(c) Physicians and dentists who had had some active service in the Army, Air Force, Navy, Marine Corps, Coast Guard, or U. S. Public Health Service, either as medical or dental officers or otherwise. Insofar as practicable, the induction of physicians and dentists in this classification should be in inverse order according to the number of full months of active service they have had; i.e., those with the lowest number first, and those with the most last.

4. (Limited Duty) That, in order to create an equitable distribution of military service of physicians and dentists, all physicians and dentists shall be inducted including those who have physical defects which do not interfere with the full time private practice of either profession and which will not interfere with the efficient practice of medicine or dentistry within the Armed Forces. To the end that such induction may be possible, the physical standards of the Armed Forces shall consider the functional ability of the inductee primarily and the anatomic and physiological defects secondarily. Inductees of this category shall be assigned to duty in a manner similar to the Fulheims system of the British Army, which, following an assessment of the man's physique and the defects, then assigns the individual to a station, work, and area compatible with his functional ability and defects. It is recognized that the problem of service aggravation of disabilities existent prior to induction will exist but it is felt that an equitable rule can be determined by study of this problem by the Medical Policy Council, Department of Defense, and The Surgeons General of the Armed Forces.

5. (Resignation of Reserve Commission) That a definite means should be provided whereby a doctor or dentist in the ready reserve may resign his commission when the country is not in a state of war or national emergency declared by the President. A definite means should be provided whereby a doctor or dentist in the standby reserve may resign his commission when the country is not in a state of war or congressionally declared national emergency.

6. That it shall be the duty of the civilian medical and dental representative of the President, possibly the existent chairman of the Medical Policy Council, Department of Defense, and his dental representatives, to be cognizant at all times of the use of the medical and dental personnel within the Armed Services. It shall be their duty to bring to the attention of the Surgeons General any instances in which medical or dental personnel are not being used to

their fullest extent and economy consistent with service needs while members of the Armed Forces.

SPEAKER CHARNOCK: Thank you. This resolution has been designated as emergency, and will be sent to Reference Committee No. 3.

Any more resolutions?

DR. BLANCHARD: This is a resolution having to do with deduction of medical expenses for income tax purposes.

WHEREAS, It is most desirable that all possible aid be given to encourage distribution of medical care to the greatest number of persons under the private enterprise system; and

WHEREAS, The payment of income taxes on income needed to pay medical expenses (less than 5 per cent of gross income) falls most heavily and disproportionately on citizens in the low income brackets; and

WHEREAS, It is inequitable that a person be taxed for attempting to restore his health after sickness or accident; and

WHEREAS, His restoration to health would thereby increase or insure his productivity and in turn the productivity of the nation; and

WHEREAS, Legislative and other public officials have suggested a possible solution in the form of tax relief; therefore be it

Resolved, That the California Medical Association through its American Medical Association delegates seek to encourage national legislation which will permit medical expenses actually paid by the taxpayer, such as doctor, hospital, laboratory, drugs, and dental expenses, and health and accident insurance premiums, to be completely deductible by the patient for income tax purposes.

SPEAKER CHARNOCK: That will be referred to Reference Committee No. 3.

DR. HENRY GIBBONS III: This resolution is being introduced on behalf of the delegates from San Francisco.

WHEREAS, In recent years there has been considerable advance in the technical knowledge and skill in the conduct of postmortem examinations; and

WHEREAS, The correlation of findings and information obtained at these examinations is necessary for the more accurate determination of the cause of death; and

WHEREAS, The present Coroner System operating in the counties of California often does not adequately cope with the problems that must be solved in order to determine cause of death in many cases; and

WHEREAS, The Medical Examiner System in effect in some commonwealths and states of the Union is proven to be more efficient in solving these problems, thereby benefiting the welfare of the community and lessening the cost of crime detection and aiding the progress of medical science; now, therefore be it

Resolved, That the Council of the California Medical Association petition the State Legislature to pass a bill enabling the establishment of a modern medical examiner system on a statewide basis.

SPEAKER CHARNOCK: Thank you, Dr. Gibbons. As that is an emergency resolution, it will be referred to Reference Committee No. 3.

DR. GIBBONS: The second resolution is also introduced on behalf of the delegates from San Francisco.

WHEREAS, A resolution was introduced and passed this House at the annual meeting of 1950 which was as follows:

"Whereas, The subject of medical service and hospital service corporations is of vital interest to the people of California, especially the medical profession; now therefore be it

"Resolved, That the House of Delegates of the California Medical Association instruct the Council of the California Medical Association to make a thorough study of all possible government regulations of hospital service and medical service corporations, open panel, closed panel, mutual, non-profit, and profit, so that any time legislative action in this field is imminent a program to defend the rights of the people of California and good medicine will be at hand and some emergency expediency will not have to be used."

WHEREAS, Compulsory socialized medicine on a state and federal level has been temporarily deterred in favor of voluntary health insurance; and

WHEREAS, Organized medicine has asserted itself in establishing medical service as one of the features of voluntary health insurance; and

WHEREAS, Prepaid medical service plans have had essentially no regulation on a state or federal level; and

WHEREAS, There is a great threat to high standards of medical practice by substandard practices in medical service plans; and

WHEREAS, It is the duty of organized medicine to use all influence possible to get high standards for voluntary health insurance, and in particular medical service plans; and

WHEREAS, There is justification to having any regulations of medical service plans on a state basis rather than on a federal basis; and

WHEREAS, This House of Delegates formed a Medical Services Commission by resolution at its Annual Meeting in 1952 with duties to study all matters relative to voluntary health insurance; therefore, be it

Resolved, That the foregoing resolution passed in this House in 1950 be referred to the Medical Services Commission with instructions to immediately make a thorough study of all possible legislative action that might define and guarantee high standards of medical service in all prepaid plans, including hospitals, clinics, panels, groups, corporations or any other method whereby the same is furnished; and be it further

Resolved, That this resolution be considered as an emergency due to the expediency of the time.

SPEAKER CHARNOCK: Thank you, Dr. Gibbons. That is an emergency resolution and will be referred to Reference Committee No. 3.

Are there further resolutions?

DR. THOMAS FOSTER:

WHEREAS, No standardized requirements in California are necessary with regard to those sciences which are basic in relation to the healing arts; and

WHEREAS, In certain instances there are notable deficiencies evident in the quality of instruction in these basic sciences; and

WHEREAS, Care of the ill would be obviously improved by the institution of adequate basic sciences requirement; and

WHEREAS, The benefits of such requirements have already been fully demonstrated in those states where such requirements exist; therefore, be it

Resolved, That the president of the California Medical Association appoint a commission whose function shall be:

1. To thoroughly investigate the problems involved in such requirements.

2. To formulate suitable legislation with the aid of legal counsel and other informed sources.

3. To seek legislative relief utilizing such public relations counsel as appears necessary and desirable successfully to achieve this goal.

SPEAKER CHARNOCK: That will be referred to Reference Committee No. 3.

DR. LEON FOX: This resolution is presented on behalf of the delegates from Santa Clara County in regard to the prorating of dues monthly.

WHEREAS, It is the continuing experience of county medical societies to elect new members during any of the twelve months of the year; and

WHEREAS, Such county elections also include election to the California Medical Association, with the attendant dues obligations of that Association on the basis of a full year's dues payable by all who are elected prior to July 1, and a half year for all those elected after July 1; and

WHEREAS, This situation often creates an unfavorable reaction among members newly elected during the months of May, June, October, November, and December; now, therefore, be it

Resolved, That Chapter X, Section 4, Part (d) of the By-Laws of the California Medical Association be amended to provide that all new members who acquire membership in the Association in any month after April 1 in any year, be required to make payment of the annual dues prorated on a monthly basis only for the remaining months in the year.

SPEAKER CHARNOCK: This resolution will be referred to Reference Committee No. 4.

Are there any more resolutions?

VOICE: Is this the last time to introduce resolutions which shall lay on the table until the annual meeting, or may they be introduced in tomorrow's meeting?

SPEAKER CHARNOCK: We'd like to have them now, if you can, or you can present them as new business.

There's one correction which the chair would like to make which has been pointed out to me by my good friend and colleague, Dr. Craig. Those members who present emergency resolutions must do so by permission of the House, and a two-thirds vote of the House. We checked this with our By-Laws, and we were using the copy that was uncorrected. We have had three emergency resolutions presented. I shall have to ask your permission to accept them as emergency.

... Whereupon separate motions were made that the resolution on Public Law 779 introduced by Dr. Graeser, the resolution on the Medical Examiner System introduced by Dr. Gibbons and the resolution on the Medical Service Plan introduced by Dr. Gibbons be accepted as emergency resolutions. A vote was taken on each, and each motion was passed by a two-thirds vote. . . .

DR. BURT DAVIS: I have two resolutions which I had hoped to withhold until tomorrow because committee action is supposed to be forthcoming at that time, but since it is in order to present them now, I shall read them.

WHEREAS, It has been stated that there are communities in which adequate medical facilities are not available; and

WHEREAS, It has been suggested that this is a real problem which warrants governmental interference in the practice of medicine; and

WHEREAS, This problem can be better resolved by the Medical Association than by a political director; therefore, be it

Resolved, (1) That Council of the California Medical Association be directed to survey the needs of the various communities to determine the specific areas in which medical service may be inadequate; and be it further

Resolved, (2) That the California delegation to the American Medical Association be instructed to enter a resolution in that house for a similar study on a nationwide basis; and be it further

Resolved, (3) That other state medical associations be encouraged to enter upon similar studies to the end that a cooperative survey may be made of the United States for the determination of these needs.

The second resolution is a sequel to the first.

WHEREAS, A cooperative study of areas requiring medical services is desired and forthcoming; therefore, be it

Resolved, That in areas in which need exists the C.M.A. in cooperation with the A.M.A. institute the following program:

1. The C.M.A. and A.M.A. arrange with local agencies in the areas to provide for the physical plant required for the satisfactory medical practice.

2. The C.M.A.-A.M.A. enlist the services of recent qualified graduates of medical schools to fill the vacancy that has been previously determined and guarantee to the physician and surgeon a satisfactory minimum amount for a period of three years.

3. C.M.A.-A.M.A. encourage the physician to expand his practice by allowing him to retain any excess which he may make beyond this minimum amount.

4. Upon completion of the three-year term the physician shall be assured that (a) he may remain in the community and retain his established practice or that (b) C.M.A.-A.M.A. will arrange a satisfactory residency for additional training should the physician desire not to remain in the locality.

5. In the event that the physician remains, the problem of that locality will be solved. In the event that the physician returns for further training the area shall be open for relocation in a similar fashion.

SPEAKER CHARNOCK: Thank you, Dr. Davis. These will be referred to Reference Committee No. 3.

VOICE: I would like to know if I would be in order if I would make a motion for a reconsideration of the emergency measure of the resolution pertaining to Public Law 779. Would I be in order at this time?

SPEAKER CHARNOCK: Wouldn't you like to take that up to the Reference Committee, and then after the Reference Committee has dealt with it, find out how they deal with it, and appear before that Reference Committee and talk to it, and then we can deal with it on the floor of the House again?

VOICE: One of the reasons I rise at this time, is it possible for the Reference Committee, when it brings its report, to overrule the House of Delegates in making this a regular resolution rather than an emergency?

SPEAKER CHARNOCK: This will be an emergency resolution, as it stands at the present time.

VOICE: Then I'd like to make a motion for a reconsideration of the vote of the House.

VOICE: A point of order. How does the supporter of this motion vote?

SPEAKER CHARNOCK: That is well taken. Did you vote with or against this motion?

VOICE: I voted against it.

SPEAKER CHARNOCK: Then you cannot ask to reconsider. You have to vote with the prevailing side.

If there is no objection, we will recess this meeting until ten o'clock tomorrow morning.

... Whereupon the meeting was recessed at 4:50 p.m. . . .

Sunday Morning Session

... Whereupon the meeting was called to order by Dr. Wilbur Bailey at 10:20 a.m. . . .

SPEAKER BAILEY: Gentlemen, the House will be in order. The first order of business is the report of the Credentials Committee.

DR. THOMAS FOSTER: Mr. Speaker, there are well over 130 delegates seated, and accordingly we do have a quorum.

SPEAKER BAILEY: Then with the permission of the House, and if the Speaker hears no objection, we shall accept the roll call in the same manner as we did yesterday; that a quorum is present.

The next item of business will be the report of the Medical Services Commission by Dr. Gibbons.

REPORT OF MEDICAL SERVICES COMMISSION

DR. HENRY GIBBONS III: To the President and the House of Delegates:

The Medical Services Commission has held two meetings of its executive committee and two meetings of its entire membership since its appointment by President Alesen.

The commission is prepared to carry on a continuous and detailed study of the problems of prepaid medical care and is fully aware of its responsibility to act in an advisory capacity to the California Medical Association on these problems. The commission believes that among its many functions is the consideration of the value of medical services and procedures where indicated. It will cooperate with all C.M.A. committees having to do with medical economics, prepaid medical care and related subjects. It will collect, codify and maintain data on prepaid medical care and related subjects. The commission now has under study a tentative set of standards which, when evolved, can be used as a guide by the profession and by the public in evaluating prepaid medical care programs. We hope to establish the machinery whereby persons or organizations may come for guidance on problems of prepaid medical care. The commission is so constituted that it may carry out the wishes of the House of Delegates.

The commission has met with representatives of the A.M.A. Council on Medical Services, A.M.A. Council on Industrial Health, and the A.M.A. Bureau of Medical Economic Research. It has also met with men in the insurance industry who are well known for their knowledge and activities in the voluntary prepaid health insurance field. The commission believes that it can gain considerable knowledge and information by discussing the problems of prepaid medical care with authorities in this field. Meetings with members of the insurance industry are planned for the near future. The commission has also followed closely the San Francisco Medical Society's recent study of the labor health center plan as proposed by the San Francisco Labor Council. The commission is now preparing to or-

ganize itself so that its members may become thoroughly familiar with all phases of prepaid medical care and through this means be in a position to evaluate and appraise the set of standards already referred to.

Your commission is fully cognizant of the magnitude of the task assigned to it by this House of Delegates.

SPEAKER BAILEY: Thank you, Dr. Gibbons.

DR. GIBBONS: Mr. Speaker, I move this report be approved.

... Whereupon a vote was taken and the report was approved. . . .

SPEAKER BAILEY: Now we will go to the report of the Industrial Accident Fee Schedule Committee, by Dr. Cox.

REPORT OF INDUSTRIAL ACCIDENT COMMISSION FEE SCHEDULE COMMITTEE

DR. FRANCIS J. COX: Mr. Speaker, members of the House of Delegates: I was asked to render a report to the House of Delegates at this time from the Fee Schedule Committee for the Industrial Accident Commission, as I understand it, primarily to disseminate information, rather than to make any formal and final report to the membership of the California Medical Association. You will find on your chairs a rather comprehensive and detailed report of the historical background, which I think is something that should be read by every member of the C.M.A.; it is to be published in the next copy of the JOURNAL. I have no intention of reading it word-by-word. I do not propose to take up your time that much today. Perhaps a few comments to clarify some of the things that are mentioned in that report would be pertinent as preliminary to telling you what the present status of the problem is.

The report is based on the only available, early, documented fee schedule that we have, which is for 1918. We have, in the *California State Journal of Medicine* for 1914, verification of the fact that the original schedule for service under the Workmen's Compensation Act was based on the \$1,000 a year income groups. By looking backward for the period of time from 1914 to the present date, in excess of 38 years, there has not been a comparable and proper change in the Industrial Fee Schedule. That's perfectly evident in the report. It's common knowledge.

As the industrial situation developed, the Workmen's Compensation Law was written originally, and as the scope of that law has developed, it has included many, many factors of medical care other than industrial injury. Many medical problems are now considered industrial, and the scope of the act is increasing rather than decreasing, as the years go by.

As the act developed, there also were certain legal implications introduced into the conduct of that act, and doctors have been drawn into this medico-legal phase of the picture as the act and its

application have developed. The theory that a man is entitled to a monetary return for his permanent disability demands the services of physicians.

The Industrial Accident Commission, rather than simply administering an act designed to pay for the medical care of an injured man, has now become, in fact and in theory, a court of law. There are defendant attorneys, represented by the various representatives of the insurance industry, and recently an increasing number of plaintiff attorneys on the opposite side. When you have two controversial opinions of that type, there are controversial opinions bound to be rendered by people hired on one side or the other.

What I'm striving toward is to teach you the concept that a fee schedule for the care of the illnesses and diseases and injuries incurred in industry does not encompass solely and only medical costs in terms of the services needed to render medical care. Therefore the cost must be higher than it would be in private practice, and is higher.

Now our committee has met with the insurance industry since the meeting in Coronado in 1950. At that time there was an extreme antagonism toward the medical profession, not only on the part of the insurance industry, but also on the part of the members of the Industrial Accident Commission, and most of the lay people that we have to deal with in trying to change this picture to increase the fees.

We sat with those people for over a year—perhaps a year and a half—and we listened to a great deal of criticism, and I assure you there was a vast amount of it. We took it all under consideration. Some of it was justifiable; some we did not feel was justifiable. But we listened, and we also tried to make more simple a lot of the medico-legal problems concerned in the treatment of the injured or diseased workman.

In the course of that conversation of over a year or a year and a half, we drew up, after a great deal of collaboration, a series of simplified forms for reporting on the nature and extent of disease or injury, and progress, up until the termination of the case. It was our understanding that those forms were to be disseminated and adopted, and it was with direct information from the insurance industry that our committee sent to you at one time in the past a copy of those simplified forms, stating that they would be adopted. They have not been, as yet.

During this time we tried, on several occasions, to bring up the pertinent subject of a change in the fee schedule. The agreement in 1950 was that we would change the schedule at the end of two years. I can recall on one occasion in Los Angeles when we presented only the three basic items, the three key items of cost—the initial visit, the follow-up visit, the hospital visit. The only comment I recall from that presentation was a very bitter criticism of fishtail Cadillacs, and a rather bitter criticism of doctors and their avaricious attitude for more money.

It got nowhere, in any event—this effort on our

part to initiate some discussion as to value of the basic fee in care of the problems under this Act.

It became apparent to us about that time that we probably were not going to get too far with direct negotiations, and we attempted at that time to delve into other channels that we might approach to solve this problem—one of them through the Senate Interim Committee having to do with Workmen's Compensation, and we approached the people on that committee and discussed that matter rather broadly. We began to consider other solutions. We had nothing definite to work with.

As still more time went by, the two years lapsed and we still had gotten nowhere. We decided about that time that the only thing we could do was to throw pressure on the insurance industry from some other approach, and we went back to our original contact with the Senate Interim Committee.

Now the Senate Interim Committee had a meeting in San Francisco on July 14-15 of this year. We appeared before that committee. We presented our problem, not in any great detail, but we demonstrated to the people of the Legislature that we did in fact have a proper request for an increase in the schedule of fees for physicians. We told them that we had not been able to solve this problem by direct negotiation. We told them further that the Industrial Accident Commission had, in 1949, denied the right to set fees, a right which they had exercised since 1914. We told them that we did not agree with that decision, but that we did not know how to force the commission to change that decision. We told them that for a number of years the insurance industry had used the excuse that it would require a three-year loss experience ratio to determine a change in premium rate. That was a very strong argument against any rather large change in the fee schedule. That situation was clarified about eighteen months ago by law in the State Legislature, which now allows for immediate relief in premium rate for any increased cost, so that old protest on the part of the industry no longer existed.

As the result of that discussion in public, and strangely, as I look back, we gave our presentation without any rebuttal whatsoever from the insurance industry on that particular day, and nothing further was said. The next day there was rather a strange protest filed with the Senate Interim Committee to the effect that it was a hopeless situation to deal with these doctors anyway; they never knew what they wanted in the first place, and if you dealt with a few of them, the rest of them would be in clamoring for more in a day or two.

We straightened that situation out by sending a further letter to the Senate Interim Committee, detailing the fact that we were speaking for the California Medical Association, and not for any group. We detailed the fact that we had prepared a schedule in the early part of 1952, had disseminated it completely and widely throughout the state to every county medical society; that we had averaged out the replies and that we had drawn up a schedule which we felt was fair and equitable, not only to

the insurance industry, but also to the medical profession; and they were presenting it as a unit, in a sense, and as a unit, it represented the total membership of the California Medical Association.

Now subsequent to that time, shortly thereafter, and I rather wonder if it was not because of that episode, the insurance industry met. They had had a copy, or at least had had the information about our basic fees, for over a year. We had never heard anything about them.

They had had our proposed schedule since April of 1952. It was not until August 20 that we heard from them, and at that time they offered us a 10 per cent overall increase on the 1950 schedule; that is the schedule which is in existence at the present time. They offered just a flat 10 per cent overall, with certain provisions, and these are pertinent provisions; that the 10 per cent increase would not become effective until such time as the application of the premium rate increase became effective, following review by the Insurance Commissioner of the State of California. They made a further provision that pay for care of a patient who was under treatment before the 10 per cent increase went into effect was to be continued at the old rate for one year. I thought that was a reasonable request. At the expiration of one year, any case under treatment would then be paid for on the new basis.

But the request that we hold in abeyance the adoption or institution of a new fee schedule until the premium rate had been adjusted by the Insurance Commissioner was one that struck me rather badly, and struck the rest of our group rather badly, for this reason: about that time the insurance industry went to the Insurance Commissioner of the State of California, requesting an increase in premium rate based first on an increase in cost. Now a minor part of that might possibly have been concerned with medical costs. The larger percentage of it, I rather believe, was concerned with increase in permanent disability rating benefits, increase in operational cost, increase in acquisition cost of one type or another. I won't give you exact figures, because for the moment I've forgotten them. The request was made for a loading of about 10.1 per cent. They received a substantial amount of that request—about 8.6 per cent.

Now, in addition, they made a second request for increase in premium rate based primarily on acquisition cost. Now here you must understand that we're talking about different types of insurance companies. There is the State Fund, which is a mutual company, operated by the state, which returns a certain amount of premium to the employer in case he has a low loss ratio; there are other participating companies of this type—to name a few of them, Industry Indemnity, Pacific Indemnity, Pacific Employers, etc.

If I have a nurse in my office, it costs more for me to protect that nurse against injury or disease incurred in her ordinary occupational duties than it does if I insure a large group. If I insure a thousand people, it costs less to write that than if I in-

sure one. As a consequence, some of the large participating companies were placed in a position where they could return a very large portion of their premium to the employer and, in so doing, compete on a preferential basis with the smaller companies writing the smaller type policy.

Now the premium rate is based on the average cost; it isn't based on the large accounts—it's based on the low account; and the Insurance Commissioner took this attitude: that if the premium rate were based on the cost for the average policy, then the people who were writing large amounts of insurance and large groups were, in fact, making more than they were entitled to, and he felt as a consequence that their premium rate should be lower per individual covered.

The insurance industry accepted his first offer—I mean the first grant he gave them in increased premium. Instead of discussing the matter of his second decision, the several larger companies have instituted legal proceedings in the Superior Court to challenge his decision.

Now the net end result is this: The Insurance Commissioner takes the attitude that these several large companies are in effect getting a premium of around \$5,000,000 a year to which they are not entitled. So long as that matter is in the Superior Court, it probably won't be decided for a year or more. As long as that matter is in the courts, the Insurance Commissioner says there will be no premium change for any reason whatsoever, and where does that leave us?

We knew this before the original meeting with the Senate Interim Committee, and we decided about that time that there wasn't much sense in trying to negotiate directly with the insurance industry any further. Upon the advice of the members of the Council, we drew up this report, which is in your hands. We have sent it to every member of the Legislature. We have sent it to all of the chambers of commerce throughout the State. It has been released to the press, and some of you may have seen reference to it in certain newspaper articles in the State. The only reason that we did not turn it loose on the doctors was the simple matter that we couldn't get it into print fast enough. It's going out at the earliest possible date of publication, which will be in the December issue.

The copies which you have now are identical with the matter that will be published then.

We went to the Senate Interim Committee in Los Angeles on September 23-24 of this year, and on this occasion we presented them with a very detailed demand for serious consideration about legislation to force some agency, preferably the Industrial Accident Commission, to hear our plea, and to divorce our plea totally and completely from any problems that might be concerned with the payment of the fee on the part of the insurance industry. I think we made a very satisfactory impression upon the Legislature.

It is interesting, to my way of thinking, to quote from the comments that were made in public in

Los Angeles as late as September of this year—comments made by a representative of the insurance industry who has headed this Insurance Committee for many years, and who certainly knows the problem backwards and forwards, and perhaps knows it much better than I do. I quote:

“Now I want to make certain statements about the medical picture generally. The pressure that comes on this fee schedule comes from other than people who do perhaps 90 per cent of all the industrial work in California.

“I haven’t the figures available, because I came here today unprepared to do so, but I would anticipate that 90 per cent of all such services rendered are by people who specialize in, or are equipped to handle industrial cases. We receive no pressure from these people, because they feel apparently our fees are not shockingly out of line.

“We have demonstrated, particularly in the past three years, a willingness to try to adjust our differences with the doctors. Medical costs in California are highest in the nation. The answer we received to that is that this is not peculiar to industrial charges, but exists as well in private cases.”

So that is the type of thinking with which we’re dealing. As we have gone on to try to solve this difficult problem, we have had conversations with various members of the Industrial Accident Commission, and as we have developed our own background: I think we have begun to change their thinking, perhaps from an antagonistic one to one of approval. There are certain members of the Commission who have expressed in conversation to me the opinion that the Industrial Accident Commission has a proper right to listen to the plea of the doctors and to adjust their request for an increase in the fee schedule. Because of that fact, we have recently submitted a petition, a copy of the fee schedule, and an economic study substantiating our plea to the Commission, and they are to hold a meeting within the next week or two (I was hoping it would be before this session) to decide whether or not that decision which was rendered in 1949, that they had no legal power to adjust a fee schedule, was correct or not.

Now if they decide that that decision was erroneous, then we, I think, will be in a position where we can go right ahead. The present legal counsel doubts very much that the opinion rendered in 1949 was correct.

Trying to substantiate and to further improve our position, we have requested from the legislative counsel of the State Assembly an opinion regarding this particular legal knot. I don’t know at this point just what the Commission is going to do. I do feel, however, and those of us who are working with this problem feel that we should try completely and totally to divorce any fee schedule request from any agreement with the insurance industry based on a proper premium change to accommodate for that increased cost.

I have reason for that thought, in the sense that

at present some of the companies involved might be hurt a bit, but the insurance industry as a whole has an abundant surplus—the \$5,000,000 referred to—to pay the total amount that we require to put our new schedule into effect. The total cost of the new schedule will be less than \$5,000,000 per year, so that I have no sympathy with their pleas at this time.

Now, if the Industrial Accident Commission does not see fit to change its thinking, does not see fit to hear us, then we have two alternatives. Because, again, of the appearance and the pressure put upon the insurance industry in Los Angeles, the insurance industry has now changed its mind, and they are considering the fee schedule which we gave them in April. We have correspondence from them to indicate that they would have a counter proposal based on that fee schedule in our hands by now. It was supposed to be in our hands by December 1. Perhaps I’ll get it tomorrow, or maybe next week. If the schedule is proper and reasonable, and if it can be compromised adequately, then I think we can go to the Commission with a little bit better feeling on both sides.

I know that one serious bone of contention will be the provision about the premium rate change contingency.

The last and only alternative we’ll have if we fail in direct negotiations with the insurance industry or with the Commission is to request some type of legislation before the State Assembly in January, which will give to the medical profession proper legal standing in this problem. The exact nature of that legislative request I cannot give at this time, because it has not been drawn up. The authority to act, if that contingency arises, was rendered to us yesterday by the Council, not only to this committee, but also to the Legislative Committee.

Now I hope that we will not have to go that far. I would certainly much prefer to solve the problem with the tools that we have at hand, but for the past 34 years, we’ve gotten nowhere, and we’ve got to change our thinking, and we’ve got to start acting in an extremely aggressive fashion on our own.

Now, in summary, may I request that you who represent the various segments of the State carry this conversation back to the various members. It’s surprising to me to realize that I have honestly tried to disseminate this information publicly and in the JOURNAL continually during three years’ time, and I’m continually accused by doctors in individual status that they have been totally in the dark, and they thought this matter was dropped long ago, and they wonder why the C.M.A. doesn’t do something. We have been doing everything in our power, everything that is reasonable, and everything that we could humanly do to solve this difficult problem for you. Please be patient with us. We hope to solve it within the next year.

I’m sorry about taking so much time, but that’s the status of the problem at this time. (Applause.)

SPEAKER BAILEY: The House has already said part of what the Speaker intended to say.

Will you give us some idea of how much of the premium dollar goes to doctors now?

DR. COX: About 12.8 per cent of the premium dollar is paid out to doctors at the present time. Now will you refer to the statistical sheet in the pamphlet in front of you. The first column states that there has been a 12.5 per cent increase in the medical fees during the years 1946-1951. Take that and apply it over to column 7. Physicians' income in the United States during a comparable period increased by 15.1 per cent. Remember that the 12.5 per cent increase applied to the figure 15.1 per cent is a negligible amount, because the average doctor is not going to get that much money in turn, so that actually what we're talking about is the economic viewpoint, and there is nothing unreasonable whatsoever in requesting a 36 per cent increase in costs, because the total cost in dollars and cents is not as much as it might appear.

SPEAKER BAILEY: Thank you, Dr. Cox.

If ever there was a magnificent example of bureaucracy at work, this is it. There is no need for further action by the House on your report.

DR. COX: No. This committee, as I understand it, was appointed by the Council of the C.M.A. and responsible to them. The report today was disseminated for matters of information, so there is no need for approval or disapproval.

DR. BAILEY: Thank you, Dr. Cox.

If there is no objection, we will proceed next with the report of the Committee on Public Policy and Legislation.

REPORT OF COMMITTEE ON PUBLIC POLICY AND LEGISLATION

DR. DWIGHT H. MURRAY: Mr. Speaker, Dr. Aleson, Dr. Green, and members of the House, on November 4 you, together with the other voters of California, gave the legislative report. (Laughter.)

In the medical profession in California, we're interested in a good many campaigns, of course; beginning at the top, the President and Vice-President, and next our own U. S. Senator, then coming down to the House or to the Congress of the United States. There were thirty members to be elected this year. The results of those elections I'm sure you're quite familiar with.

Coming down to the State of California, we have every four years half of the Senate to elect, and half of them were elected this year, and we have the entire Assembly to elect every two years, eighty in number. Also, the results of those elections are well known to you all. I do not have to go over those figures with you, because you know them just as well, or perhaps better than I do.

I want to say this before I close, and I want to say it early because I wish to emphasize the fact that here in California, as all over the country, you now have time to talk to your representatives before they

go to the Legislature and the Congress. If you have any problem, medical, or otherwise, now is the time to talk to them. Tell them your thinking about it. Try to inform them on the various problems relative to medicine and to the care of the people of our country. Give them your ideas and what you think about it, and I'm sure that they will appreciate it.

Now of course no members of any committees have been formed, but it is of course entirely possible that many members from California will be on various and important committees in the halls of Congress, and likewise, of course, in California, your own particular Assemblyman or your own particular Senator may have an important voice in forming the policies that will come this coming year. We look forward to some problems, as you have already heard Dr. Cox say. He's tired of running, so it looks like we're going to have to do something about this problem that he talked to you about this morning.

We also have our usual problems with the chiropractors, osteopaths, naturopaths, etc., that we'll have to work out. We have the vocational nurses' problem that we'll have to help them with. We have also the problem of the clinical psychologists. We have problems with the physiotherapists, and all in all, it looks like we'll have a great many problems.

However, for the first time since 1943, we feel that we'll not be bothered very much with the problem of socialized medicine. We think that we haven't solved the problem, but the voters of California have solved the problem for us. (Applause.)

I would like at this time to tell you a little bit about your Legislative Committee and office, and how we expect to operate this coming year. Our office will be in the Sacramento Hotel, as it has been for the past several years. Ben Read and Ed Clancy will be there to look after the office all the time. Mr. Hassard, our legal counsel, and myself do quite a little commuting during the time that the Legislature is in session. Then we have two members of the Legislative Committee, one who is new and just appointed by the Council, and another who may not be known to you all. Mr. Speaker, will you please ask Jim Doyle to stand.

... Whereupon the Speaker asked Dr. Doyle to stand, which he did. (Applause.) ...

DR. MURRAY: Jim Doyle has practiced in Hollywood and is experienced and astute as a politician, and he will give us very valuable experience at Sacramento.

The last and newest member appointed is Dr. Dan Kilroy of Sacramento.

... Whereupon Dr. Kilroy stood and was applauded. ...

Dr. Kilroy, as you see, is a good-looking Irishman, and smart as a steel trap. We expect him to be on the job at Sacramento and give us a lot of help, together with our Surgeon General (maybe you don't all know the name that we give Frank MacDonald, but Frank MacDonald is the Surgeon General of the Legislature), who will be there to give us his usual valuable assistance.

Now that is the program that we have in mind this year, and I assure you gentlemen that we are ably and soundly and capably backed up by the Council, by the general office, and by the medical profession of the State of California, and we shall do our best to protect the health interests of the people of California during our coming session of the Legislature.

Don't be surprised if you're called on at one or two or three o'clock in the morning, or most any other time. We'll not spare the horses when it comes to getting anybody that we think will help us with any of our problems.

Now having so many members here just come back from the meeting of the A.M.A. held Tuesday, Wednesday, and Thursday in Denver, I think probably it would be interesting to you to know a little bit about the action taken in regard to some of the bills and some of the problems before the House of Delegates there. I think you're probably interested in the Doctors' Draft Bill. There was quite a lot of discussion about the Doctors' Draft Bill, this being one of the very important points: is it legal or should it be possible to draft doctors to take care of the non-service connected cases for the dependents of service people?

That required quite a lot of discussion. It was finally decided that inasmuch as the Supreme Court is to hand down a decision relative to the drafting of doctors, that decision to be handed down in January, and furthermore nobody knows how the new President is going to stand in reference to the number of people in the Armed Forces, and because of several things, it was decided that it would be wise to hold up the Doctors' Draft Bill until this information from the United States Supreme Court and information from the President-elect could be secured. Insofar as the medical profession is able, that will be done. That was the action taken by the House of Delegates in discussing the Doctors' Draft Bill.

We got into some discrepancies in figures. Our own Council on National Emergency Medical Service says that for the next fifteen years, 1,500 doctors are all that we'll be short of supplying the needs of the Armed Services. They feel that the Armed Services, by cutting a little here and cutting a little there, can make up that adjustment and perhaps the profession in the country can boost the enrolment a bit, and thereby make it unnecessary to have a Doctors' Draft Bill.

Again, the Armed Forces' figures don't quite correspond with that. They're a little evasive as to just how many people they will need, and also quite evasive on the subject of how much time is spent by the doctors in taking care of non-service connected disabilities, and in taking care of the dependent members of the Armed Forces. Until we can get all those figures, it seems likely there will still be a bit of an argument, but we hope to get that straightened out before very long.

Now another bill in which I'm sure that you'll all be interested was the one that was proposed by the

Trustees and many of the members of the House with regard to determining where the responsibility of the care of the non-service connected disability should go. The figures are very clear that if that is extended on and on and on, we'll get into astronomical figures for the cost of the care of these people, and that also puts us in a bad way trying to supply the number of doctors that are necessary. The idea of an officer of the Board of Trustees of the American Medical Association was to submit that problem to Congress to determine where the responsibility should lie in the care of these people—the non-service connected and the dependents of the personnel; whether it should be the responsibility of the Federal Government, or whether it should be the responsibility of the local and state government; whether or not the non-service connected case should not be taken care of at home on the same basis as anybody else who was unable to pay his medical bill.

However, the representatives of the American Legion and the Veterans Administration felt that we should not ask for legislation, should not ask Congress at the present time to determine that question, so it is held off for a time for further study. What the results of that will be we'll have to wait and see.

I think the question has come to the mind of all of you about the appointment of the new Federal Security Administrator, Mrs. Hobby of Houston, Texas. I'll say that she was unknown to the vast majority of the profession of the United States. However, the doctors of Texas raised their eyebrows when they heard of this appointment, and we're not passing judgment on Mrs. Hobby at all. We're waiting until we can have a conference with Mrs. Hobby and discuss these problems with her.

I assure you that no time will be lost, and no stone unturned, to secure as early as possible a conference with Mrs. Hobby, as well as other leaders of the new administration with regard to our problems of the care of the people of the United States. That will be done with all the fairness and celerity that is possible.

I'm very glad to be here, and again I want to assure you of the great appreciation of the Legislative Committee in all the help we have had. I think in all the years that I have been at Sacramento, which has been entirely too many, that I have never but one time had one man refuse to assist me, and then I felt that he had a very just reason to do so, and he appointed some man in his place to do what I asked him to do. I want to assure you that the whole Legislative Committee appreciates that, because without the assistance of the medical profession, your Legislative Committee would be hamstrung.

Now you all know that as the California Medical Association, or any component county society, you cannot do anything with regard to politics, but as doctors of medicine, as citizens of the State of California, we as yet have a perfect right to talk as we see fit, and I hope that always continues. Thank you. (Applause.)

SPEAKER BAILEY: Thank you, Dr. Murray, for your usual good report.

Next is the report of Committee No. 3 on resolutions, Dr. Halley, chairman.

REPORT OF REFERENCE COMMITTEE No. 3

DR. HALLEY: Mr. Speaker, members of the House of Delegates, Reference Committee No. 3, consisting of E. C. Rosenow of Los Angeles County; Francis Rochex of San Francisco County, and myself, was given a total of seven resolutions for consideration and recommendations at the meeting of December 6, 1952. Three of these resolutions, to wit: Nos. 1, 3, and 4, were voted by the House of Delegates as emergency resolutions. A hearing was given to all seven of the resolutions, but all resolutions not declared emergency will remain in committee until the annual meeting of the House in May of 1953.

Resolution No. 1, introduced by Dr. Graeser of Alameda County, refers to the provisions under which doctors of medicine and dentistry will be selected for service in the Armed Forces of the United States.

Your Reference Committee feels very strongly that the resolution presents a most important problem, particularly for those individuals who face induction into the Armed Forces in the near future. At the hearing, members of the delegation to the A.M.A. and others emphasized the need for a change in the laws affecting procurement of physicians and dentists into the Armed Forces. It was pointed out by the delegates that A.M.A. is now taking action on this whole problem and felt there would be nothing added to have this resolution passed. Certain inconsistencies were pointed out, for example, the development of limited duty of physicians and dentists is not under Selective Service. The physical standards for acceptance are those established by the various branches of the Armed Services and are not subject to the regulations of Selective Service. Another example of the inconsistency of this resolution with Public Law 779 is that the resolution calls for registration within 30 days after graduation whereas the present law requires registration within five days.

Your Reference Committee reiterates that many points in the resolution have real merit. We feel, however, that this is not the appropriate time for the presentation of this resolution and that it is not acceptable in its present form. We therefore recommend that it *do not pass*.

Mr. Speaker, I move the adoption of this section of our report.

SPEAKER BAILEY: The chair calls attention to the fact that a "yes" vote will defeat the resolution.

... Whereupon a vote was taken, and the resolution was defeated, and that section of the report was adopted. . . .

DR. HALLEY: Resolution No. 3, introduced by Dr. Gibbons of San Francisco, deals with the establishment of a medical examiner's system in the State of

California. Your committee feels that since there have developed many inadequacies of the coroner system, operating in the counties of California, that there is a definite need for enabling legislation for the establishment of a modern medical examiner's system. This system has been established in many states and has proved to be eminently satisfactory to the medical profession, the law enforcement agencies, and the other branches of government. This legislation would make it possible for smaller communities to avail themselves of the most modern methods and expert services of trained pathologists and toxicologists which are not now available to them. The committee wishes to offer a substitute resolution reading as follows:

Resolved, That the Council of the California Medical Association urge a legislative study leading to the establishment of a medical examiner's system on a statewide basis similar to that now in effect in several states and found to be vastly superior to the antiquated coroner system.

Your committee, therefore, recommends that this resolution, as amended, *do pass*.

Mr. Speaker, I move the adoption of this section of our report.

SPEAKER BAILEY: Is there any discussion?

DR. GIBBONS: I could accept this change, as it will accomplish in the end the same purpose that this resolution was introduced for. I would like to explain a little further the advantages of a medical examiner system. I believe this project is a worthy one, and should be adopted.

There are methods now in the antiquated coroner system to determine the cause of death, but the new medical examiner system is a medical-legal system that will be established to make it not only possible, but mandatory to establish the full facts concerning the causes of death in those cases where it is indicated. At present a great deal of money of the community is wasted by antiquated methods and legal procedure which become very involved. To back up this statement, I think the delegates of the Alameda Association probably know more about it than I can tell you now, but Dr. Morris, a pathologist, was sent to study the system in Alameda County, and he recommended that they adopt a medical examiner system.

The purpose of such a system is to establish a central laboratory for data on facts concerning the cause of death, to have it run by a competent and well-trained pathologist, and have this central information available for all communities.

This resolution is, if the State Legislature passes it, merely enabling legislation, so that the various counties can establish this system in their counties. I think all of us should acquaint ourselves with the advantages of this system so we can talk about it at home.

VOICE: Point of information. Do these resolutions that are passed as emergency resolutions have to be passed by a majority of two-thirds?

SPEAKER BAILEY: Yes, two-thirds. Are you ready for the question?

... Whereupon a vote was taken and the resolution as amended was passed, and the section of the report was adopted. . . .

DR. HALLEY: Resolution No. 4, introduced by Dr. Gibbons of San Francisco County, refers to the duties and functions of the Medical Services Commission.

Inasmuch as the functions specified in the 1950 resolution are among those functions now assigned to the Medical Services Commission, your committee feels that this resolution is a good one and recommends a *do pass*.

Mr. Speaker, I move the adoption of this section of our report.

... Whereupon a vote was taken and this section of the report was adopted. . . .

DR. HALLEY: Mr. Speaker, I move the adoption of the report as a whole.

... Whereupon a vote was taken and the report was adopted as a whole. . . .

DR. HALLEY: That completes our business for this session, and I want to again thank the other two members of our committee, Dr. Rosenow and Dr. Rochex, who have been most cooperative in all our meetings in the past year, and have certainly lessened the job of chairman of this committee immensely. I also wish to thank, and the committee joins me in this, everybody who appeared before our committee yesterday either for or against these resolutions, because without your comments, we wouldn't have proper guidance, and we certainly appreciate your appearances there.

I'd also like to thank, on behalf of the committee, Mr. Hunton, Mr. Hassard, and Mrs. Laughlin, for their usual fine help in committee meetings. Thank you. (Applause.)

SPEAKER BAILEY: At this time we'll recess the House, unless there be objections, and turn the meeting over to Dr. Albert C. Daniels, chairman of the Committee on Scientific Work, for a paper by Col. William Todd Jr. We will then reconvene after the scientific program.

DR. DANIELS: Yesterday we had the pleasure of hearing from Dr. Hopper of the University of California, who gave us a very interesting approach to the theoretical treatment of burns, showing the value of the sodium ion particularly in the treatment, and how perhaps the use of large quantities of plasma such as has been recommended in the past may not be necessarily the treatment of choice. Today we're very fortunate in having Col. Todd, chief of surgical service at Letterman Army Hospital, talk to us about the present treatment of acute burns. Colonel Todd. (Applause.)

... Whereupon Col. William A. Todd, Jr., delivered an address on "Present Concepts in the Treatment of Acute Burns." . . .

DR. DANIELS: Thank you very much, Colonel Todd. We certainly appreciate your presentation.

I will now turn the meeting back to Speaker Charnock.

SPEAKER CHARNOCK: I'm sure that the House is indebted to Dr. Daniels and the Committee on Scientific Work for these two very fine presentations of the scientific program.

At this time we'll resume the deliberations of the House.

... Whereupon Dr. Wilbur Bailey assumed the chair. . . .

SPEAKER BAILEY: We will now have the report of Reference Committee No. 4 by the chairman, Dr. Arthur Kirchner.

REPORT OF REFERENCE COMMITTEE No. 4

DR. ARTHUR KIRCHNER: Mr. Speaker, members of the House of Delegates, your Reference Committee No. 4, composed of Dr. Wayne P. McKee, Dr. Albert G. Miller, and myself has held hearings on the proposed amendments to the Constitution and By-Laws, and recommends as follows:

This is the amendment that you people are quite familiar with after yesterday's session, and the committee has amended Section (d) by striking out the \$4.00 at the end of the section and substituting the following:

"(d) Those active members who have reached the age of seventy years and who have been active members in good standing of this Association for a period of at least twenty years, and who have been certified to the Association by their respective component societies to have limited their practices due to advanced age or physical disability, may be reduced to such proportion of the regular annual dues as the House of Delegates may determine, but in no event less than the sum of the minimal charges for the annual subscription to the Association's scientific magazine, and the annual required assessment for the benevolence fund."

One thing that has come before me since we had our meeting has been a number of questions about illness, and I'd like to refer you to our Constitution, under Article IV, Section 3, and I'd like to read it to you so that you will understand there's no conflict.

"The Council, on recommendation of the component society, may grant leaves of absences to those who are seriously ill and cannot practice, or who must leave practice temporarily for postgraduate study, or other purposes acceptable to the component society, and during such leave, a uniform reduction of fees shall be established by the Council, provided no leave may exceed one year, but shall be subject to renewal."

The committee further wishes to point out that the dues of an active member may be paid by the component society from which he comes, if the society so desires.

As now amended, the committee recommends a *do pass*.

... Whereupon a vote was taken and the resolution was passed by a two-thirds vote.

DR. KIRCHNER: If you will refer to the amendment of the Constitution and By-Laws dated December 6, you will see that Amendment No. 1 is actually Amendment No. 2, and Amendment No. 2 is actually Amendment No. 1.

This amendment as introduced by Dr. Shipman of the Council is the one that has to do with more than 200 members. The other one has to do with more than 500 members in a county organization.

The members who appeared before the committee favored the adoption of the amendment covering counties of 200 or more. This amendment which separates the judicial functions from the administrative functions in governing bodies of county societies is flexible in its wording. In other words, if in any county the Council is having disciplinary hearings, if that governing body of the Council desires that the Council shall continue to have those hearings, that is their privilege. On the other hand, if they desire that another group should hold these disciplinary hearings, that again is their privilege, so that gives flexibility to this amendment, so that the counties affected may apply the By-Laws as best suits their needs.

There were a number of people from counties of 200 or more who felt that was very good, and for that reason the committee recommends a *do pass* to the resolution applying to counties of 200 or more.

VOICE: One point that occurs to me, perhaps legal counsel can answer, and that is: Can the C.M.A. create something within a county society such as a Judicial Council?

MR. HASSARD: Yes, on the subject of disciplinary procedure it can. For the past approximately fifteen years, the By-Laws of the California Medical Association have governed all procedure in disciplinary actions in the county societies. That was originally included in the By-Laws of the C.M.A. in order to avoid inconsistent or conflicting types of proceedings by various societies, and these amendments do not change the code of disciplinary procedure, which is a part of the By-Laws of the C.M.A.

SPEAKER BAILEY: Mr. Hassard, will you point out, to make sure the House understands it, that the entire Council may still serve, as this thing has been rewritten, or we may take less. We in Los Angeles are interested because to get twenty-three men out until 2 a.m. in the morning for four or five days in a row is difficult.

MR. HASSARD: The first draft of this particular amendment called for the creation of a judicial council in societies of 200 or more, to be composed of society members who were not on the governing board of the local society, whether it be called council or other terms. There was an objection raised to that draft on the ground that the members and the society should be free, if it wished, to have as members of its judicial council those physicians who have been elected to office. Accordingly, the amend-

ment was redrafted prior to its introduction, and in the redrafted form, it is optional, in each society to which it applies, for the governing board of that society either to appoint physicians who are not on the governing board, or to appoint physicians who are on the governing board. The judicial council can be composed entirely of members of the local governing board, again whether it be called Council or the Board of Directors, or it may be composed of physicians who are not on the governing board, depending on the local governing board's wishes.

SPEAKER BAILEY: There is, therefore, nothing to prevent the entire Council from serving just as it always has, if it wishes to do so.

VOICE: Does this resolution supersede the present governing board or present Council in the local societies?

MR. HASSARD: If I understand the question, the answer is "no," it does not. It has no bearing on the functions of the Council of the local society except solely as to the hearing of disciplinary charges, and as to that, it permits the Council of the local society either to be the hearing body by appointing itself as the judicial council, or to appoint others for that purpose. It enlarges rather than diminishes the powers of the Councils of the local societies.

... Whereupon a vote was taken, and the resolution was passed by a two-thirds vote. ...

DR. KIRCHNER: Now I'd like to refer you back to Amendment No. 1, and we the committee feel that this is the alternate to the amendment that you have just voted upon, and action therefore is unnecessary, and the committee has no recommendations.

Amendment No. 3 introduced by Dr. Ward of San Francisco is as follows:

"(e) Prior to the Annual Session in each year the Council may, by a two-thirds majority vote, elect to cancel the Interim Session for such year, in which event all resolutions and new business introduced at the Annual Session may be acted upon thereat and sub-section (c) above shall not apply."

This was a very controversial amendment, and members of the House appearing before the committee were divided in their opinion, and our committee itself was divided in opinion as to the wisdom of continuing the Interim Session on a mandatory basis. The committee believes that regardless of the technical wording of this or any other By-Law change regarding the Interim Session, an expression of the House should be obtained.

For that reason a majority of the committee recommends that this amendment *do pass*.

SPEAKER BAILEY: Is there any discussion?

DR. MAGOON: I would like to discuss this proposed amendment, not on the basis of the virtues of the Interim Session (I'm sure you're all familiar with the fact that I'm a proponent of the Interim Session), but on the manner in which it intends to accomplish the purpose of the elimination of the Interim Session.

The Reference Committee itself, by inference, has

stated regardless of the technical wording, which I think can be accepted as the admission that there is an error in the technical wording of this proposal, that any objection is fundamental to the extent that it represents a cancellation of a regular meeting of a legislative body by a separate executive administrative body, which I consider to be contrary to the principles of good democratic and good representative government, and even as a matter of temporary expediency, should not be in the By-Laws of the C.M.A.

I will not disagree with the opinion of the Reference Committee that the House should be given an opportunity to register its opinion. After all, it's been registering opinion at every meeting of this House for the last two years, and another opportunity is still in order. The purpose of this proposed amendment, as it was explained to the Reference Committee, was that it was the first step in the proposal next time to present an amendment entirely eliminating the Interim Session, and this was to lessen the confusion of the changeover.

The advice of counsel and my own strong opinion is that confusion would be minimal, particularly since there is a stretch-out between the two sessions of the House of Delegates. The Reference Committees will have plenty of time to do all their work, so that whether their resolutions are to be considered at the same meeting or a later meeting is immaterial and rather unimportant.

In order, therefore, to make the issue sharp and clear, and not complicated by technical considerations of what is good democratic and good representative government, I move to amend the report of the Reference Committee as follows:

That Reference Committee No. 4 will prepare and introduce at the first meeting of the next Annual Session of the House an appropriate amendment to the By-Laws of the California Medical Association to accomplish elimination of the Interim Session.

There is more than one amendment necessary. The whole By-Laws will have to be gone through on individual inconsistencies, and the job should be done right here rather than in a manner that is purely a temporary expedient and contrary to good practice.

SPEAKER BAILEY: The motion to amend is up for discussion.

DR. WARD: Having introduced this motion, I am very frank to admit that it was to accomplish the cancellation of the Interim Session. I voted for the continuation of the Interim Session last year in order to give it a chance to work. I think that I'm probably not much in error when I say that it hasn't worked; at least it hasn't accomplished what we hoped for it when we put it into the new Constitution. The answer to that came yesterday when the Reference Committee chairman said he had not had a single communication, except one solicited, about any of the measures that came before him.

I'm perfectly willing to go along with Dr. Magoon's new proposal because it will accomplish what

I attempted to accomplish by this rather hastily drawn amendment that I put in, so I'm making a plug for the change that Dr. Magoon has just suggested.

SPEAKER BAILEY: The change in effect is a motion to recommit, with instructions to the committee. Is there any further discussion?

DR. E. E. WADSWORTH: Just to lend weight to Dr. Ward's statement, I'd like to inform you that we have 176 total registrants, delegates and alternates. We're entitled and should have 244 delegates and their alternates, which would make a total of 488. If that doesn't demonstrate a lack of interest in this particular meeting, we need no other evidence on that.

Dr. Ward has also already mentioned the lack of response to the Reference Committee. I think that Dr. Magoon's statement about lending too much authority to our Council is a little in error, inasmuch as our Council is an elected organization, and we delegate certain chores to them. Those chores are pretty well kept in balance and checked, and it is their function to run our organization. Repeated meetings of a large group are unwieldy and do not perform their function well. I think we should have confidence in our elected Councils.

The meeting is not, as I understand it, eliminated. It is simply discontinued unless it is needed. In our present Constitution and By-Laws, there is provision for emergency meetings that may be called either by petition or by vote of Council.

SPEAKER BAILEY: The problem is, should we recommit this and have proper legislation prepared and introduced, eliminating the Interim Session, and secondly, if we decide to do that, or if we defeat that recommitting to committee, should we take it as it stands, with Council deciding whether they want Interim Meetings or not.

VOICE: Point of information. If the vote passes to recommit, how long will it take them to eliminate the Interim Session? How long must this lay over, and how long before we get back to the old Constitution, if the House desires?

SPEAKER BAILEY: It could be brought up at the next session by By-Law amendment, and I should think could take effect immediately.

VOICE: I'd like to answer that. The identical resolution was presented the last time, and the committee at that time deliberately kept it in committee and advised against it and said that they would present a resolution which would accomplish what is proposed to be accomplished in Dr. Magoon's amendment. It did that and it could have been passed at the last session, but it was voted down, so the answer to the question is that it can be passed at the next session if introduced in the first meeting.

DR. MAGOON: Would it be in order to answer that question by saying that by either mechanism, this could be the last Interim Session of this House.

VOICE: Some time ago the chair ruled that emergency measures were to be carried by two-thirds ma-

jority. I wonder if that is correct, and I wonder if this is an emergency measure.

SPEAKER BAILEY: This is a By-Law amendment. Resolutions require a two-thirds vote. This just requires a majority vote. Are you ready then to vote on the motion to recommit?

... Whereupon a vote was taken and it was decided to recommit. . . .

SPEAKER BAILEY: It now goes back to committee.

DR. KIRCHNER: We will now consider Amendment No. 4 introduced by Dr. Fox of Santa Clara regarding the prorating of monthly dues. The amendment calls for the prorating of dues on a monthly basis for new members. As presented the amendment does not quote the section of the By-Laws that should be amended. In its amended form, therefore, so that the House may have clearly before it the wording of the section amended, the committee has added to it the following additional paragraph.

"So that Subsection (d) of Section 4, Chapter X, will read as follows:

'(d) Dues of New Members; Amount Payable. All doctors of medicine becoming active members of this Association shall pay to this Association the annual dues payable by active members for the period for which membership is obtained, except that new members who acquire membership in any month after March in any year shall pay annual dues prorated on a monthly basis for the remaining months in the year. Such payment shall entitle such new member to all rights to active membership in this Association until the end of the current calendar year.'"

The committee did not have an opportunity to hear the administrative side of this situation—just what it would do to the California Medical Association offices and their work, and it recommends that Mr. John Hunton, our Executive Secretary, be heard before we vote. However, if so clarified, the committee recommends that this amendment *do pass*.

MR. JOHN HUNTON: Mr. Speaker, members of the House, I appreciate the opportunity of discussing this proposed amendment, particularly since in my opinion the administrative problems would far outweigh the advantages gained by adopting this amendment.

It is simple enough to say that you can divide your annual dues by twelve and prorate them. That's a matter of simple arithmetic, but in actual practice, I would like to point out to you that thirty of the forty county societies in California do not have executive secretaries. In those counties, a physician member serves as the secretary without compensation, and relies upon his own office help in keeping the records of the society and in keeping the books of the society. In dealing with annual dues of \$40.00, the pro-ratio would come to \$3.33 per month. A member who was elected to membership in April pays into the county society the dues for eight months. The secretary of the society, or his secretary, may not report that member to the California Medical Association until July or August, and be-

lieve me, it happens every day. In that case you have collected eight months' dues from the member at county level; in the C.M.A. office we're entitled to receive only seven months, or five or four months' dues. We then have to send back a check for the prorated amount to the county secretary, who in turn must return that check to the member. It means an awful lot of extra bookkeeping.

Administratively, the C.M.A. can handle it without any difficulty. We can hire more help and write more letters and put on a few more postage stamps, but I'm thinking of thirty county secretaries who have the problem in their laps. The larger societies with the full-time offices will have no problem at all. In those societies when the member is elected, he's reported to the C.M.A. almost immediately.

Now thinking of the new member coming into membership who may feel that in paying dues for a full six months, when he only enjoys membership for two months—he may feel he's paying for, or buying a dead horse. That has been thought of, and handled in the following manner: the new member elected in the last two months of the calendar year, or the last two months of the first half of the calendar year, becomes a member of the county society, enjoys all the privileges of membership of the county society, but is not reported to the C.M.A. as a member until July 1 or January 1. We don't know when a county society elects a member. We know only when he's reported to us. We collect dues accordingly, to the date on which the report of his election to membership comes into our office.

Now to take care of the man who may come in at an odd period of the year, it is very simple for the county society just to hold up the report of membership to C.M.A. until the appropriate time. The member may then save a couple of months' dues instead of being stuck for them. I think the angle there offsets the advantage that might be under some other system, and would eliminate a lot of extra bookkeeping.

I would also call your attention to the fact that there's a provision in the By-Laws at the present time that any new member coming into membership after July 1 of any calendar year pays only half the annual dues for that year, so that there's a break at mid-year. The period involved, therefore, is not more than six months at the outside. The bookkeeping involved, I think, would far outweigh whatever advantages might be gained by individual members, and we do receive 800 or 900 additional new members each year.

I will also call your attention to the fact that the American Medical Association likewise breaks up its dues on a mid-year basis, with the new member coming in on a prorata basis in C.M.A. not being entitled to a similar prorata in A.M.A. Likewise I think, to the best of my knowledge, all state medical associations require either the breaking of dues at mid-year, or no break whatsoever. I thank you.

SPEAKER BAILEY: Thank you, Mr. Hunton, for this ingenious mechanism. The motion before the

House is the committee's *do pass* recommendation. Is there any discussion?

DR. LEON FOX: I proposed this resolution and wish to speak on it. I have no desire to question the veracity of our capable Executive Secretary, Mr. Hunton. However, I believe he will find by experience with this proposed service to new members that most of the bookkeeping will be done by the component society secretary, and the smaller the society the more important I think this is, and actually the least number of people will be involved. Having been a secretary at the time when our society was small, I think this bookkeeping is not a very great problem. The bookkeeping in the C.M.A. will be encumbered, of course, by the reports of component societies. Mr. Hunton tells me that there is no problem at all with the present system of prorating dues on a semi-annual basis. It's difficult for me to see how dividing the year into twelfths instead of halves will create an appreciable amount of additional auditing or bookkeeping.

This is a requested favor for young physicians coming into our society who are desirous of having complete, unquestioned membership in county societies, and C.M.A., and receive their Journal and also to have all the other benefits which we don't all know about. Even if it should prove to be more trouble and expensive, we believe it is important enough in easing the burden on many individual members to warrant your approval of prorating C.M.A. dues on a monthly basis. It will make members happier, and it certainly seems a logical proposal.

SPEAKER BAILEY: Thank you, Dr. Fox. Is there any further discussion?

... Whereupon a vote was taken, and the amendment was not passed. ...

DR. KIRCHNER: I wish to move the adoption of the recommendations of Reference Committee No. 4 as amended.

... Whereupon a vote was taken and the report and recommendations were adopted as amended. ...

SPEAKER BAILEY: Thank you, very much, Dr. Kirchner. You and your committee have done yeoman work.

DR. KIRCHNER: I want to thank everybody involved, and my deepest sympathy to our successors.

... Whereupon the meeting was recessed at 12:45 p.m. ...

Sunday Afternoon Session

... Whereupon the meeting was reconvened at 2:15 p.m., Dr. Charnock presiding. ...

SPEAKER CHARNOCK: Will the House please come to order. The first order of business at this time is the report of Reference Committee No. 1, Dr. Batten reporting.

REPORT OF REFERENCE COMMITTEE No. 1

DR. DOUGLASS H. BATTEN: Mr. Speaker, members of the House of Delegates, Reference Committee No. 1, composed of Dr. J. W. Moore, Ventura; Roland

R. Jantzen, Shasta, and myself, chairman, has met and heard discussions upon matters which were presented for its consideration. The only business which was brought before Reference Committee No. 1 was the consideration of the recommendations of the C.M.A.-C.P.S. Study Committee. Your Reference Committee first of all wishes to express its very sincere gratitude to the C.M.A.-C.P.S. Study Committee for the hours of painstaking research, thought, and effort that went into the preparation of this splendid report.

Your committee has reviewed this report as a whole, and has listened to lengthy discussions concerning it, and has arrived at the following conclusions concerning the specific recommendations of the C.M.A.-C.P.S. Study Committee:

1. That recommendation No. 1, namely, "That the House of Delegates of the California Physicians' Service be abolished and its functions be transferred to the House of Delegates of the California Medical Association," be approved. Your committee recommends a *do pass* on this recommendation.

Mr. Speaker, I move the adoption of this section of our report.

... Whereupon a vote was taken and this section of the report was adopted. ...

DR. BATTEN: That recommendation No. 2, namely, "That the Council of the California Medical Association serve as the nominating committee for California Physicians' Service Trustees," be approved. This committee recommends that this recommendation *do pass*.

Mr. Speaker, I move the adoption of this section of our report.

... Whereupon a vote was taken and this section of the report was adopted. ...

DR. BATTEN: That recommendation No. 3, namely, "That the Board of Trustees of California Physicians' Service organize and finance a subsidiary non-profit corporation qualified under the insurance laws of California to write indemnity-type health insurance," be approved. It is the recommendation of your committee that this item *do pass*.

Mr. Speaker, I move the adoption of this section of our report.

... Whereupon a vote was taken and this section of the report was adopted. ...

DR. BATTEN: This committee has reviewed recommendations 4 through 13 of the C.M.A.-C.P.S. Study Committee. This committee is in agreement with these proposals in general, but the committee feels that these proposals entail some basic changes in the practice of medicine which should be discussed in the component county medical societies. We, therefore, feel that no action should be taken on these matters at the present time. We recommend that each delegate submit these proposals to his county medical society for discussion at the earliest opportunity.

It is the opinion of this committee that any local county medical society could institute this program

in its own society at any time should it wish to do so. This committee feels that specific action on these recommendations by the House of Delegates of the California Medical Association at this time would be premature and should be delayed until the next session, by which time each component county medical society will have had ample time to study and discuss the proposals and to instruct its delegates in what action it desires to have taken.

Your committee recommends to the Council that arrangements be made to provide speakers to local county medical societies on the subject of the C.M.A.-C.P.S. Study Committee report if any local county medical society requests such additional clarification.

Mr. Speaker, I move the adoption of this section of our report.

... Whereupon a vote was taken and this section of the report was adopted. ...

DR. BATTEN: In view of our report to this point, we feel that recommendation No. 14 is no longer applicable.

Mr. Speaker, I move the adoption of this section of our report.

... Whereupon a vote was taken and this section of the report was adopted. ...

DR. BATTEN: The committee invites any comments, discussion, or constructive criticism of the C.M.A.-C.P.S. Study Committee report between now and the next session of the House of Delegates, at which time this committee will submit a final report.

Your committee wishes to thank the many members of the House of Delegates who appeared before it to discuss the points at issue. As chairman of the committee, I wish to thank Dr. Jantzen and Dr. Moore for their effort and cooperation and Mrs. Rooney for her splendid services as secretary for the committee.

Mr. Speaker, I move the adoption of this report as a whole.

... Whereupon a vote was taken and the report was adopted as a whole. ...

SPEAKER CHARNOCK: Thank you, Dr. Batten, and your committee for this very excellent piece of work. (Applause.)

SPEAKER CHARNOCK: I may say here that this is the first time in my experience that Reference Committee No. 1 has been handed a very major job, and they have done it very well.

At this time we'll turn the meeting over to our Vice-Speaker and C.P.S. for the report of their reference committee.

... Whereupon Dr. Bailey assumed the chair. ...

SPEAKER BAILEY: In view of your action, this will never happen again. From now on, the Speaker will also run the C.P.S. meeting, because it will be the same.

Dr. Cass, I thought you might say a word; merely that the trustees were in favor and knew all about

our report, and were in favor of the report as it came out. Is that not true?

DR. CASS: Yes, I'll be glad to. The C.P.S. Board of Trustees is very much impressed by the fact that thousands of working hours of these doctors were put in on C.P.S. problems. Actually it's the first time that we have had constructive thought and not a bunch of rotten tomatoes. .

The C.P.S. Board of Trustees welcomes this report. We think it's terrific, and I hope everybody in the State of California and the whole medical society reads this report carefully and digests it, because it's almost a reference text book on prepaid medical care.

I don't think there's a place in it where the Board of Trustees disagrees. We believe in everything that was put in this report, and we hope that from now on the members of the C.M.A. will be more conversant with the problems of C.P.S.

It seems as though when we put a new trustee on the board times past (I know it was my case), we put somebody on that doesn't like C.P.S., and sometimes they'll pass a remark that "you were a nice fellow until you went on the board, and now you're a stinker like the rest of them." Actually the work on the Board of Trustees of C.P.S. is very similar to the work that this committee has had. It's difficult to understand, and most of your trustees will tell you that he didn't really know what the score was until he had been a trustee for about a year, and I think that this committee (a well-chosen committee because the intelligence of this group is very high) has done a big favor to the medical society by becoming indoctrinated. You can see from the tone of this report that they're constructive now, whereas a year and a half ago that wasn't true. They came into this thing feeling that they had a mission. They had something to do to correct something that was bad, and the idea at first was not to cooperate with the board heavily, but to get their own independent viewpoint. Now they have done it and there's no difference in their thinking and that of the board.

I believe that all of you would do well to read this over and over, and get acquainted with what is going on in other Blue Shield-Blue Cross plans across the country, because that is the hope and salvation of the medical profession, even though we do have a Republican President. Thank you. (Applause.)

SPEAKER BAILEY: Thank you, Dr. Cass. As chairman of this committee, I'm sure I speak for all when I say we enjoyed working with the trustees, and we all now understand a great deal more. The biggest problem is to get the membership to understand it, too. I hope everyone understands that.

Now we'll call on Dr. Teall, who is chairman of the C.P.S. Resolutions Committee.

REPORT OF C.P.S. RESOLUTION COMMITTEE

DR. TEALL: I have the rare prerogative of assisting a patient to commit suicide.

The report of Dr. Donald Cass, president of California Physicians' Service, was accepted, and your

committee wishes to commend the president and the Board of Trustees for the very evident desire to cooperate in the activities of the C.P.S. Study Committee and in the recommendations arising from that committee's activities.

Parenthetically, I'd like to comment that in the last twenty-four months, the refreshing breath of spring that has come between the Board of Trustees and the members of the California Medical Association has been marvelous to witness, and the evident desire of the Board of Trustees to hear and be responsive to the membership of this organization has been a source of deep satisfaction to us all. Your committee recommends the adoption of this section of the report.

Mr. Speaker, I so move.

...Whereupon a vote was taken, and this section of the report was adopted....

DR. TEALL: Resolution No. 1 is the one that implements the committing of suicide of the Administrative Members and the fusion of services with the House of Delegates. The resolution was presented as written by our own legal counsel to modify the By-Laws of the C.P.S. (This has to do with making the Council of C.M.A. the nominating body for the trustees of the C.P.S.)

It is the consensus of opinion of your Reference Committee that nominations should be for specific vacancies, and that election proceedings by the House of Delegates should be to elect a specific nominee to a specific vacancy. As presented yesterday, the resolution left the opportunity to nominate a panel of nominees, and then the two with the highest number of votes would automatically be elected. In the discussion before the Reference Committee, there was universal feeling on the part of everyone who attended the hearing that this should be by individual nomination for an individual vacancy, and we have therefore amended the original resolution as follows:

"At least thirty days prior to each annual meeting of the Administrative Members (House of Delegates), the Council of the California Medical Association shall select one or more nominees with respect to each existing vacancy on the Board of Trustees and each vacancy to occur at the forthcoming annual meeting."

And to add to the end of Section 13 the following:

"The House of Delegates shall separately vote on each vacant trusteeship to be filled."

Mr. Speaker, the committee recommends that the resolution be passed as amended. I so move.

...Whereupon a vote was taken, and this section of the report was adopted and the resolution was passed as amended....

DR. TEALL: In considering Resolution No. 2, the question was raised as to the advisability of establishing such corporation until the California Medical Association House of Delegates has taken definitive action on the recommendations of the C.P.S. Study Committee, which it did fifteen minutes ago. However, representatives of the Board of Trustees

of the C.P.S. have stated that formation of such a wholly owned disability insurance company will probably be required by the present operation of the corporation because of the increasing importance of the inclusion of hospital insurance. For this reason, your committee recommends that this resolution do pass. Mr. Speaker, I so move.

...Whereupon a vote was taken and the resolution was passed....

DR. TEALL: Mr. Speaker, I wish to commend the members of the committee, Dr. Leon P. Fox and Dr. Hollis L. Carey, for the work involved. It was the most friendly, courteous, kindly meeting the C.P.S. Reference Committee has ever had in its long and difficult history.

I move the adoption of this report as a whole.

...Whereupon a vote was taken and the report was adopted as a whole....

...Whereupon Dr. Charnock assumed the chair....

SPEAKER CHARNOCK: We will now reconvene as the House of Delegates of the California Medical Association, and the next order of business is the election of a delegate and an alternate to the American Medical Association. I'm going to ask Mr. Hunton to comment on this before the nominations are put in order.

MR. HUNTON: Mr. Speaker and members of the House of Delegates, the A.M.A. gives representation to the component state associations on the basis of one delegates and one alternate for each 1,000 active members whose A.M.A. dues have been paid, or fraction of 1,000. The C.M.A. has now eleven delegates in the A.M.A., on the basis of slightly less than 11,000 members last year. At this time we have passed beyond the 11,000 mark, and therefore next year will be entitled to twelve delegates. However the official membership count in the A.M.A. is taken on December 31, so that not until after December 31 can we be notified officially that we're entitled to one more delegate.

At the same time the By-Laws of the A.M.A. provide that a delegate shall start his service in the year following the year in which he is elected, so that in order to have an additional delegate in 1953, he must be elected prior to January 1, 1953. Therefore the election held at this time will necessarily be subject to receipt of official word from A.M.A. that C.M.A. is entitled to an additional delegate and alternate.

SPEAKER CHARNOCK: It seems as if we're just going to elect somebody so that we'll be prepared.

The chair will now receive nominations for the office of delegate to the American Medical Association.

NOMINATION AND ELECTION OF DELEGATE TO A.M.A.

DR. CASS: I would like to nominate Frank MacDonald of Sacramento. Dr. MacDonald, as you all know, has been very active in his county association and served for years on the Council of C.M.A., and

also as trustee of C.P.S. In addition, he's been Pete Green's alternate for a number of years, and has attended the A.M.A. conventions, and in our present set-up, we have agreed that we will send our alternates back at our expense, and give them a course in training so that when the delegates are elected, we prefer to elect those who have been alternates. I believe that Frank MacDonald has served his apprenticeship. He's really a delegate already, and I would like to state that the delegates to the A.M.A. would like to have Frank back there with them.

DR. GREEN: I would like to second that nomination, inasmuch as he served very well as my alternate.

SPEAKER CHARNOCK: Dr. Frank MacDonald has been placed in nomination. Are there any further nominations? The chair, hearing none, declares the nominations closed.

... Whereupon a vote was taken, and Dr. Frank MacDonald was elected delegate to the A.M.A....

SPEAKER CHARNOCK: We will now receive nominations for the position of alternate.

NOMINATIONS AND ELECTION OF ALTERNATE DELEGATE TO A.M.A.

DR. MAGOON: I should like to present for your consideration the name of the dean of our patriarchs, perhaps of our delegation, as a nominee for this office of alternate to the A.M.A. I call him the dean not because of his years of age, but because of the seventeen devoted years that he has spent as a member of this House. He has filled honorably and well many offices in our county medical society, culminating in that of president. His energy, his intelligence is known to all of you; he himself is known to all of you. It is my pleasure to nominate for the office of alternate to the A.M.A., Dr. Joe Josephson.

... The nomination was seconded. ...

SPEAKER CHARNOCK: Are there any further nominations?

DR. LEO L. STANLEY: I'd like to place in nomination Dr. O. R. Myers. He's been a member of the House of Delegates for a number of years. He's been a good member of his society in Eureka. He's very familiar with the affairs of military service. I would like to place his name in nomination.

... The nomination was seconded. ...

DR. DAVE DOZIER: Mr. Speaker, members of the House of Delegates, I'd like to place in nomination for the position of alternate delegate to the A.M.A. Dr. Henry Randel of Fresno. Dr. Randel has been a very prominent representative of the doctors of the San Joaquin area. Those of you who know him will know that he is, above all, a strong believer and strong supporter of the very best interests of organized medicine. Henry's always willing to take a job, and when he takes it, he's in there pitching. He does a good job. He has been a splendid representative from his area.

In considering the distribution of delegates throughout the state, this House has just accorded

the honor of delegate to a man from the northern part of the state. We're aware that the urban centers are well represented. We're aware further that the coast counties are fairly well represented. In giving the position of alternate to a man from the San Joaquin Valley, I think we would be recognizing an area where there are a fine bunch of doctors doing a fine job. I think they deserve representation. I'm sure that Henry would be a top representative, not only for them, but for our whole society.

DR. BEN FREES: I wish to second the nomination of Henry Randel for two reasons. First, he is qualified for the position, and second, the representation that he will give. This new opening, as you heard John Hunton tell us, is because the California Medical Association got new representation because of new members. I say to you that the question of representation holds just as much in the state of California as it does in the nation, and if you will examine the representation of the delegation that goes to the A.M.A., you will find that the San Joaquin Valley has no representation at all. Therefore it gives me great pleasure to second the nomination of Henry Randel.

VOICE: Some of the members don't know who this alternate delegate is to serve for.

SPEAKER CHARNOCK: This alternate delegate is to serve as alternate to Dr. Frank MacDonald. Are there any other nominations for this position of alternate?

VOICE: I move nominations be closed.

... Whereupon a vote was taken, and the nominations were closed. ...

SPEAKER CHARNOCK: We will vote by ballot on the following: Dr. Joseph Josephson; Dr. O. R. Myers; Dr. Henry Randel. Will the nominees please rise and be identified.

... Dr. Josephson and Dr. Myers rose, but Dr. Randel was not present. ...

VOICE: Mr. Speaker, Dr. Randel is having a meeting of the California Rural Health Council, and he will be delayed a little.

SPEAKER CHARNOCK: While we're waiting for the tellers, we would like to ask if any other committees would like to make a report at this time. The chair hears none.

Mr. Secretary, is there any old business for this body?

DR. DANIELS: No, there is no old business.

SPEAKER CHARNOCK: Is there any new business? I might say that at this time anybody who wishes to present an emergency resolution for settlement at this meeting may do so.

DR. FREDERIC P. SHIDLER:

WHEREAS, The C.P.S. Study Committee has clearly shown that health insurance best serves the public when it defrays the expense of catastrophic illness, and in this capacity provides more protection for the premium dollar; and

WHEREAS, It has been amply shown that coverage for all illness by insurance is unsound under any system; and

WHEREAS, The C.P.S. Study Committee recommends indemnity health insurance as the solution of health problems; and

WHEREAS, The California Medical Association has taken the lead in health insurance by its initiation of C.P.S. in 1939, and should continue to take the lead in health insurance; and

WHEREAS, Indemnity insurance policies cannot be written without a fee schedule; now, therefore, be it

Resolved, That the California Medical Association establish a fee schedule for guidance of any indemnity insurance underwriting, which shall be designated as an "Indemnity Insurance Fee List"; and be it further

Resolved, That the Medical Services Commission recommend a fee schedule for this purpose to the House of Delegates; and be it further

Resolved, That such a fee list should be represented both to the public and the physicians of California as an average fee for the specific service performed; and be it further

Resolved, That each physician be neither bound to the schedule as total payment, nor threatened with punitive action if he disagrees with the schedule; and be it further

Resolved, That all physicians in California be encouraged to use the insurance fee list as completely as possible in order to encourage the faith of the public in the medical profession.

SPEAKER CHARNOCK: This will be referred to Reference Committee No. 3.

Is there any further new business?

DR. MAGOON: Would it be in order to ask that that resolution go to Reference Committee No. 1 as being germane to the report of the C.P.S. Study Committee in covering exactly the same ground?

SPEAKER CHARNOCK: I think your point is well taken, and we'll refer it to Reference Committee No. 1.

Is there any further new business?

DR. GRAESER: Mr. Speaker, members of the House of Delegates, I apologize for bringing this back to the House, but a number of the physicians have wanted to open up the question again of the dilemma of the veterans, so I would like to offer this motion: I move that the Council be requested to consider and study, prior to the 1953 Annual Session, the subject matter contained in Resolution No. 1 introduced yesterday, and which failed to pass today.

SPEAKER CHARNOCK: Is there any discussion?

VOICE: The subject matter in this is very controversial, of course, and the people who came to us for relief will be disappointed if we say it didn't pass as an emergency resolution at which time we didn't have time to give it proper study, so by turning it over to the Council for consideration, those who seek relief in the usual fair and democratic way

can communicate with the Council, or do as they see fit, and thereby they won't feel there's something very important to them that has been voted out.

SPEAKER CHARNOCK: Is there any further discussion?

... Whereupon a vote was taken and the motion was carried. ...

SPEAKER CHARNOCK: The chair will see that the Council is asked to expedite their study of this matter.

Dr. Ruddock, will you announce the vote, please.

DR. JOHN RUDDOCK: The vote for Dr. Randel totaled is 106, which is a majority of the House, with a total of 143 votes cast.

SPEAKER CHARNOCK: I thank the tellers for their laborious task.

Is there any new business to come before this body? If not, we'll hear a motion to adjourn.

VOICE: Since Dr. MacDonald has been elected a delegate, don't we have to elect another alternate?

SPEAKER CHARNOCK: Alternates are elected at the Annual Session. In the interim, the Council appoints an alternate. It is by Council appointment at this meeting.

... Whereupon the meeting was adjourned at 3:08 p.m. ...

Executive Committee Minutes

Tentative Draft: Minutes of the 235th Meeting of the Executive Committee, San Francisco, December 20, 1952.

The meeting was called to order by Chairman Lum in Room 221 of the St. Francis Hotel, San Francisco, at 1:15 p.m., Saturday, December 20, 1952.

Roll Call:

Present were President Alesen, President-Elect Green, Council Chairman Shipman, Auditing Committee Chairman Lum, Secretary Daniels and Editor Wilbur. Absent for cause, Speaker Charnock.

A quorum present and acting.

Present by invitation were Executive Secretary Hunton, Public Relations Director Clancy, Legislative Chairman Dr. Dwight H. Murray, and Drs. Edwin E. McNiel, Douglas Campbell, Oliver Jensen and John Alden.

1. *Psychiatric Study:*

Dr. Alesen outlined the request received by the Association for a review of a report made on a research study conducted in a state hospital. It was pointed out that the C.M.A. committee had been asked only to review a report rendered.

Drs. Campbell, Jensen and Alden, representing several psychiatric societies, discussed the committee's reports and subsequent newspaper publicity

and suggested that further consideration be given to this study, possibly including committee meetings, physical inspections of hospital and patients and other actions. They suggested the committee might be augmented by adding other members representing several professional psychiatric societies and personnel familiar with institutional administration.

Discussion was also held on a request that the Association review the findings of two groups which had made nutritional studies in state hospitals.

On motion duly made and seconded, it was voted to approve the establishment of a committee to consider the nutritional questions and, if invited by legislative representatives, to give further consideration to the review of the research report originally submitted.

2. Public Policy and Legislation:

On motion duly made and seconded, it was voted to refer to the Committee on Public Policy and Legislation, for consideration, a suggestion that amend-

ments be sought by the statutes covering therapeutic abortions.

On motion duly made and seconded, it was voted to refer to the Committee on Public Policy and Legislation a question brought by a member relative to C.M.A. approval or disapproval of UNESCO and similar groups.

3. State Department of Public Health:

On motion duly made and seconded, it was voted to refer to the Committee on Public Health and Public Agencies the request of the State Department of Public Health for cooperation in considering possible problems connected with the distribution of gamma globulin.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 4:30 p.m.

DONALD D. LUM, M.D., *Chairman*

ALBERT C. DANIELS, M.D., *Secretary*

In Memoriam

ALDERSON, HARRY E. Died in San Francisco, December 13, 1952, aged 74. Graduate of the University of California School of Medicine, Berkeley-San Francisco, 1900. Licensed in California in 1900. Doctor Alderson was a member of the San Francisco Medical Society, the California Medical Association, and the American Medical Association.



BAIRD, HARRY R. Died November 8, 1952, aged 78. Graduate of the College of Physicians and Surgeons of San Francisco, 1906. Licensed in California in 1909. Doctor Baird was a member of the Sacramento Society for Medical Improvement, the California Medical Association, and the American Medical Association.



BOWLES, FRANK H. Died in Oakland, December 3, 1952, aged 72. Graduate of the Cooper Medical College, San Francisco, 1909. Licensed in California in 1909. Doctor Bowles was a member of the Alameda-Contra Costa Medical Association, the California Medical Association, and the American Medical Association.



BURGER, THOMAS O. Died in San Diego, December 18, 1952, aged 77. Graduate of Vanderbilt University School of Medicine, Nashville, Tennessee, 1900. Licensed in California in 1914. Doctor Burger was a member of the San Diego County Medical Society, a life member of the California Medical Association, and a member of the American Medical Association.



COHN, JACK. Died in San Francisco, January 2, 1953, aged 62, of coronary artery disease. Graduate of Stanford University School of Medicine, Palo Alto-San Francisco, 1933. Licensed in California in 1933. Doctor Cohn was a

member of the San Francisco Medical Society, the California Medical Association, and the American Medical Association.



CRABTREE, EDWIN H. Died in San Diego, December 1, 1952, aged 66, of rupture of congenital aneurysm of vertebral artery. Graduate of the University of Michigan Medical School, Ann Arbor, 1912. Licensed in California in 1912. Doctor Crabtree was a member of the San Diego County Medical Society, the California Medical Association, and the American Medical Association.



DAVIS, JOHN D. Died in Long Beach, December 15, 1952, aged 56. Graduate of the University of Illinois College of Medicine, Chicago, 1922. Licensed in California in 1929. Doctor Davis was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



FIELDER, ROY L. Died in Los Angeles, December 10, 1952, aged 60. Graduate of Johns Hopkins University School of Medicine, Baltimore, Maryland, 1916. Licensed in California in 1921. Doctor Fielder was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



GUSTAFSON, ROBERT K. Died in Pasadena, December 17, 1952, aged 62, of coronary artery disease. Graduate of Johns Hopkins University School of Medicine, Baltimore, Maryland, 1926. Licensed in California in 1929. Doctor Gustafson was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

INMAN, MURPHY M. Died in Palm Springs, December 8, 1952, aged 79, of coronary artery disease. Graduate of Beaumont Hospital Medical College, St. Louis, Missouri, 1897. Licensed in California in 1918. Doctor Inman was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



LEWE, GEORGE H. Died in Beverly Hills, December 17, 1952, aged 54, of coronary artery disease. Graduate of Northwestern University Medical School, Chicago, Illinois, 1924. Licensed in California in 1930. Doctor Lewe was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



McREYNOLDS, ROBERT P. Died in Los Angeles, December 19, 1952, aged 81. Graduate of the University of Pennsylvania School of Medicine, Philadelphia, 1895. Licensed in California in 1906. Doctor McReynolds was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

MUHL, ANITA M. Died in San Diego, December 14, 1952, aged 66. Graduate of the Indiana University School of Medicine, Bloomington-Indianapolis, 1920. Licensed in California in 1924. Doctor Muhl was a retired member of the San Diego County Medical Society, and the California Medical Association.



SCATENA, FREDERICK N. Died in San Francisco, December 25, 1952, aged 64, of a cerebral hemorrhage. Graduate of the University of California School of Medicine, Berkeley-San Francisco, 1914. Licensed in California in 1915. Doctor Scatena was a member of the Sacramento Society for Medical Improvement, the California Medical Association, and the American Medical Association.



WHITE, HENRY L. Died in Pasadena, December 22, 1952, aged 60. Graduate of the University of California School of Medicine, Berkeley-San Francisco, 1928. Licensed in California in 1928. Doctor White was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

C.P.S. Billing

THE FOLLOWING LISTING of most common reasons why payment by C.P.S. for professional services is *delayed*, as well as the most common reasons why it is sometimes necessary for C.P.S. to *reject* payment, originally was printed in *Progress*, the quarterly publication of C.P.S. The two lists are now reprinted in *CALIFORNIA MEDICINE* in order to emphasize their importance to physicians and to the office staffs employed by physicians. Fuller understanding of the reasons for delay or rejection will contribute much toward smoother relations between physicians and C.P.S.

Most Common Reasons Why Payment By C.P.S. Is Delayed

- Member's number is omitted or is incorrect.
- Physician's name or number is omitted, or number is incorrect.
- Physician has failed to give diagnosis of condition treated.
- The type of surgery and date of surgery are not stated.
- The type of fracture is not indicated; or a reduction is not noted as open or closed.
- No indication as to whether services were rendered to father or son, or mother or daughter, when first names or initials are the same.
- Failure to indicate that the patient is a referred case.
- Anesthetist's failure to indicate length of time for surgery.
- Investigation to determine existence of Workmen's Compensation or third party liability.

Most Common Reasons Why Payment By C.P.S. Is Rejected

- Out-patient medical care not a benefit of member's contract.
- Out-patient laboratory and x-ray service not a benefit of member's contract.
- First two visits are member's responsibility.
- Fee paid is total fee for surgical procedure; no additional fee for postoperative care.
- Medical care not a benefit of member's contract.
- Maximum out-patient laboratory or x-ray services already exhausted.
- Non-surgical obstetrics not a benefit of member's contract.
- Benefits not provided for a condition which is not an active illness or injury.
- Care rendered prior to effective date of member's contract.

NEWS & NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

Dr. Herbert M. Evans, director of the Institute of Experimental Biology on the Berkeley campus of the University of California, recently was elected a foreign member of the Swedish Royal Academy of Sciences. In a letter of notification of the election, Dr. Arne Weslgren, secretary of the academy, said that it was a token of respect for Dr. Evans' "masterly researches in the domain of endocrinology and vitaminology."

LOS ANGELES

The Alumni Association of the School of Medicine of the College of Medical Evangelists will present its seventeenth Annual Alumni Postgraduate Convention in the Ambassador Hotel, March 8 to 10, 1953. The American Academy of General Practice has granted academy members informal postgraduate credit for attendance at this assembly. The program follows:

SUNDAY, MARCH 8

- 8:00-9:00—Registration.
- 8:30—Motion picture.
- 9:00—Traumatic Disease—Silas B. Hays, Major General, Deputy Surgeon General, U. S. Army.
- 9:30—The Irritable Bowel Syndrome—J. Arnold Bargaen, M.D.
- 10:00—Intermission—Exhibits.
- 11:00—Panel—Peptic Ulcer.
Moderator: Richard B. Cattell, M.D., Surgery
J. Arnold Bargaen, M.D., Medicine
Frederick J. Stare, M.D., Nutrition
Walter C. Alvarez, M.D., Psychosomatics
- 12:00-1:30—Luncheon—Exhibits.
- 1:15—Motion pictures.
- 1:45—Early Diagnosis in Genital Cancer—Carl P. Huber, M.D.
- 2:15—Surgical Economics and Ethics—George W. Stephenson, M.D.
- 2:45—Intermission—Exhibits.
- 3:30—Panel—The Physician's Public Relations.
Moderator: Lewis A. Alesen, M.D., Surgery.
Louis Regan, M.D., Medico-Legal.
George W. Stephenson, M.D., Surgery.
Mr. John Hunton, Public Relations.
Francis Hodges, M.D., General Practice.
- 4:30-5:00—Exhibits.

MONDAY, MARCH 9

- 8:00—Motion picture.
- 8:30—Treatment of Tumors of the Soft Somatic Tissues—George Thomas Pack, M.D.
- 9:00—The Neuroses—Walter Alvarez, M.D.
- 9:30—Present Day Management of Chronic Ulcerative Colitis—J. Arnold Bargaen, M.D.
- 10:00—Intermission—Exhibits.

11:00—Panel—Low Back Pain.

Moderator: Miland E. Knapp, M.D., Physical Medicine.
Carl P. Huber, M.D., Obstetrics and Gynecology.
Houston S. Everett, M.D., Genito-urinary.
C. Hunter Sheldon, M.D., Neurosurgery.

12:00-1:30—Luncheon—Exhibits.

- 1:30—Motion picture.
- 2:00—Management of Thyroid Disease—Richard B. Cattell, M.D.
- 2:30—Latest Developments in Optimal Nutrition—Frederick J. Stare, M.D.
- 3:00—Intermission—Exhibits.
- 4:00—Hematuria—Houston S. Everett, M.D.
- 4:30—Rehabilitation—Miland E. Knapp, M.D.
- 5:00-5:30—Latest Developments in ENT—Vernon Erkenbeck, Col., MC.

TUESDAY, MARCH 10

- 8:00—Motion picture.
- 8:30—What's New in Allergy—Walter MacLaren, M.D.
- 9:00—Progress in Hematology and Laboratory Diagnosis—Maxwell M. Wintrobe, M.D.
- 9:30—Latest Trends in Therapeutics—Walter Alvarez, M.D.
- 10:00—Intermission—Exhibits.
- 11:00—Panel—Common Errors in Diagnosis.
Moderator: Maxwell M. Wintrobe, M.D., Medicine.
George Thomas Pack, M.D., Surgery and Radiology.
Carl P. Huber, M.D., Obstetrics and Gynecology.
Frederick J. Stare, M.D., Nutrition.
Houston S. Everett, M.D., Genito-urinary.
Vernon J. Erkenbeck, Col., MC., ENT.
- 12:00-1:30—Luncheon—Exhibits.
- 1:15—Urological Obstructions Resulting from Gynecological Causes—Houston S. Everett, M.D.
- 1:45—Dystocia—Carl B. Huber, M.D.
- 2:15—Gastric Cancer—George Thomas Pack, M.D.
- 2:45—Intermission—Exhibits.
- 3:30—Diagnosis and Management of the Patient with Jaundice from Extrahepatic Disease—Richard B. Cattell, M.D.
- 4:00—Office Management—Francis Hodges, M.D.
- 4:30-5:00—Exhibits.

REFRESHER COURSES—CONFERENCE CLINICS

Following the convention at the Ambassador there will be a three-day refresher course program on the Los Angeles campus of the College of Medical Evangelists. Accredited members of the faculty of the School of Medicine, College of Medical Evangelists, or of other recognized medical schools will be in charge of all instruction, and formal postgraduate credit will be granted by the American Academy of General Practice. The refresher course program will include six three-hour conference clinics, each clinic panel including representatives of the several specialties involved in the management of the case presented.

* * *

New developments in methods for protecting and improving the health of the American worker and of insuring his safety will be reported by the nation's leading industrial doctors, dentists, nurses and hygienists at the 1953 National Industrial Health Conference to be held in Los Angeles, April 19 to 24.

Professional groups participating in the conference will be the American Conference of Government Industrial Hygienists, United States Navy Industrial Health Organization, American Association of Industrial Dentists, American

Industrial Hygiene Association, Industrial Medical Association, and the American Association of Industrial Nurses.

This is the first time the six groups have ever scheduled their simultaneous sessions on the West Coast.

* * *

Dr. Paul H. Harmon, Hollywood, is returning to Rio de Janeiro, Brazil, for a two-month appointment as visiting foreign professor at the Hospital dos Servidores do Estado, a position he held for a similar period in 1951. He also will hold clinics and deliver lectures on orthopedic surgery in the following Brazilian cities: Belém, Manaus, Recife, Bahia, Curitiba and Porto Alegre.

* * *

Dr. Stafford L. Warren, dean of the Medical School of the University of California at Los Angeles, has been appointed to the Advisory Council on Neurological Diseases and Blindness of the U. S. Public Health Service. The council advises the U. S. Surgeon General on matters of policy.

* * *

Dr. Raymond Van Buren Stone, director of laboratories for the Los Angeles County Health Department, retired from that position at the end of the year after 30 years' service.

* * *

Appointment of Dr. Harold P. Tompkins as head of the radiological service of the Los Angeles Office of Civil Defense was announced recently.

RIVERSIDE

Dr. Fred D. Lord of Riverside was elected president of the Riverside County Medical Association to succeed Dr. James C. Long of Hemet, and Dr. John S. O'Toole was elected secretary to succeed Dr. Richard N. Boylan.

SAN FRANCISCO

The Northern California Chapter of the American College of Surgeons will hold its semiannual meeting on Saturday, March 14, in the Sir Francis Drake Hotel, San Francisco.

The morning, from 9:00 a.m. until noon, will be devoted to informal sessions covering the various specialties and general surgery.

In the afternoon there will be two guest speakers. The meeting will adjourn at 4:00 p.m.

SANTA CLARA

Dr. Burt L. Davis of Palo Alto has been elected president-elect of the Santa Clara County Medical Society, and Dr. George W. Waters has been installed as president for 1953. Dr. Pierce C. Barrette and Dr. Henry C. Dahleen were elected vice-presidents, and Dr. Dan Brodovsky and Dr. J. Daniel Lamon, Jr., were reelected secretary and treasurer respectively.

GENERAL

Two California physicians will be guest-participants in panel discussions at the first Western Hemisphere Conference of the World Medical Association which is to be held April 24, 1953, at Richmond, Va. They are Dr. John D. French, chief of the neurosurgery division of the Veterans Administration Hospital, Long Beach, and Dr. Dwight L. Wilbur, clinical professor of medicine at Stanford University School of Medicine, San Francisco.

The sessions will provide opportunity for a discussion of current medical problems between representatives of the

national medical societies of Latin America and United States specialists and practitioners. Dr. Louis H. Bauer, president of the American Medical Association, will moderate at a general session at which panel reports will be made.

* * *

The Pacific Coast Surgical Association will meet February 16 to 20 in Seattle and at Harrison Hot Springs Hotel in British Columbia. The first day's meeting will be held in Seattle with headquarters at the Meany Hotel, with moving pictures in the morning and clinics at the University of Washington Medical School in the afternoon. The following morning the society will board buses to Harrison Hot Springs, where the remainder of the meeting will be held.

* * *

The annual spring convention of the Oregon Academy of Ophthalmology and Otolaryngology will be held in Portland, March 23 to 27. The program has been arranged by the academy and the University of Oregon Medical School. The meeting will be divided into two sections—ophthalmology March 23 and 24 and the morning of March 25; and otolaryngology the afternoon of March 25 and all day March 26 and 27. Guest speakers will be Dr. Herman Burian, associate professor of ophthalmology, State University of Iowa Medical School; Dr. Harold Scheie, associate professor of ophthalmology, University of Pennsylvania Medical School; Dr. Kenneth M. Day, professor of otology, University of Pittsburgh Medical School; and Dr. Jerome A. Hilger, clinical assistant professor of otolaryngology, University of Minnesota Medical School.

POSTGRADUATE EDUCATION NOTICES

MEDICAL EXTENSION UNIVERSITY OF CALIFORNIA

Postgraduate Courses for 1953

Course for General Practitioners, March 2 through 6, Mount Zion Hospital, San Francisco. Fee to be announced.

Symposia on Psychosomatic Medicine, Wednesday afternoons and evenings, March 11, 18, 25. Fee to be announced. Langley Porter Clinic, San Francisco.

Diagnostic Radiology, April 6, 7, 8, at Franklin Hospital, San Francisco. Fee to be announced.

Pediatric Conference, June 22 through 26. Fee to be announced. Medical Center.

Conference on General Surgery, June 15 through 19. Fee \$75.00. Medical Center.

Obstetrical and Gynecological Conference, September 2, 3, 4. Place and fee to be announced.

Ophthalmology (for specialists), September 14 through 19. Fee \$75.00. Medical Center.

Medicine for General Practitioners, September through November. East Oakland Hospital. Fee \$50.00.

Evening Lectures in Medicine, September through November. Fee \$50.00. Mills Memorial Hospital, San Mateo (probably).

Contact: All inquiries to be addressed to Stacy R. Mettier, M.D., Professor of Medicine, Head of Postgraduate Instruction, Medical Extension, University of California Medical Center, San Francisco 22.

Continued on page 184

Postgraduate Education Notices

Continued from page 183

STANFORD UNIVERSITY SCHOOL OF MEDICINE

The Stanford University School of Medicine will offer the annual postgraduate conference in Clinical Ophthalmology from March 23 through 27, 1953. The program this year will be devoted to Ophthalmic Surgery.

Registration will be open to physicians who limit their practice to the treatment of diseases of the eye or eye, ear, nose and throat. In order to allow free discussion by members of the conference, registration will be limited to thirty physicians.

Instructors will be Dr. A. Edward Maumenee, Dr. Dohrmann K. Pischel, Dr. Jerome W. Bettman, Dr. Max Fine, Dr. Earle H. McBain, and Dr. Arthur J. Jampolsky.

Cardiology—Date: June 15-19. Fee: \$75.00.

General Medicine—Date: June 15-19. Fee: \$75.00.

Surgery of Trauma—Date: June 22-26. Fee: \$75.00.

General Surgery—Date: June 22-26. Fee: \$75.00.

Programs and further information may be obtained from the Office of the Dean, Stanford University School of Medicine, 2398 Sacramento Street, San Francisco 15, California.

UNIVERSITY OF SOUTHERN CALIFORNIA SCHOOL OF MEDICINE

Division of Medical Extension Education

No. 882—Essential Physics in Radiology

Dates: March 9, 1953, through April 10, 1953—Los Angeles County Hospital; April 13, 1953 through May 25, 1953—Cedars of Lebanon Hospital.

Tuition: \$55.00.

Speakers: Robert E. Pugh, Jr., F.A.C.R. (Assoc.), Henry L. Jaffe, M.D.

Contact: Dr. Gordon E. Goodhart, Director, Medical Extension Education, 1200 North State Street, Los Angeles 33, Calif., CApital 4195.

UNIVERSITY OF SOUTHERN CALIFORNIA SCHOOL OF MEDICINE

AMERICAN COLLEGE OF PHYSICIANS

Studies in the Clinical Aspects and Diagnostic Procedures in Cardiovascular Diseases—George C. Griffith, M.D., F.A.C.P., director.

Dates: May 2 through March 7, 1953; Minimal Registration: 50, Maximal Registration: 75. Los Angeles County Hospital Auditorium, 1200 North State Street, Los Angeles.

Fees: A.C.P. Members—\$30.00; non-members—\$60.00.

Contact: Mr. E. R. Loveland, Executive Secretary, American College of Physicians, 4200 Pine Street, Philadelphia 4, Pennsylvania.

THIRD ANNUAL POSTGRADUATE MEDICAL AND SURGICAL CONVENTION

Pioneer Memorial Hospital, Brawley

FRIDAY, FEBRUARY 27, 1953

MORNING—ENDOCRINE DISEASES

1. Gynecological Endocrinology—Dr. Charles E. McLennan, Professor of Obstetrics and Gynecology.
2. Management of Diabetic Patients—Dr. John A. Luetscher, Associate Professor of Medicine. Dr. George Bernard Robson, Associate Clinical Professor of Medicine.
3. Medical Problems of the Thyroid and Adrenal—Dr. John A. Luetscher, Dr. George Bernard Robson.

12 noon—Luncheon

AFTERNOON

1. Surgery of the Endocrine System—Dr. Victor Richards, Assistant Professor of Surgery.
2. Roundtable—Problems in Endocrinology—Dr. John A. Luetscher, Dr. Charles E. McLennan, Dr. Victor Richards, Dr. George Bernard Robson.

EVENING

Banquet—Address: Supervoltage Radiation in the Treatment of Cancer—Dr. Henry S. Kaplan, Professor of Radiology.

SATURDAY, FEBRUARY 28, 1953

MORNING

1. Surgery of the Esophagus and Stomach—Dr. Gunther W. Nagel, Clinical Professor of Surgery.
2. Diagnosis and Treatment of Lesions of the Colon—Dr. Russell R. Klein, Assistant Clinical Professor of Surgery.
3. X-ray Diagnosis of Gastrointestinal Diseases—Dr. Henry S. Kaplan.

12 noon—Luncheon

AFTERNOON

1. Surgery of the Biliary Tract and Pancreas—Dr. Victor Richards.
2. Roundtable—Gastrointestinal Hemorrhage—Dr. Russell R. Klein, Dr. John A. Luetscher, Dr. Henry W. Nagel, Dr. Victor Richards, Dr. George Bernard Robson.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES SCHOOL OF MEDICINE, Medical Extension

Postgraduate Course in Basic Neurology

Date: February 16 to June 8, 1953.

Fee: \$75.00.

Instructional Staff: Chairman, R. B. Livingston, M.D., Associate Professor of Anatomy and Physiology, University of California School of Medicine, Los Angeles; Horace W. Magoun, Ph.D., Professor of Anatomy and Chairman of the Department, University of California Medical School, Los Angeles; J. D. French, M.D., Associate Clinical Professor of Surgery, University of California Medical School, Los Angeles; Chief Neurosurgeon, Veterans Administration Hospital, Long Beach.

Contact: Thomas H. Sternberg, M.D., Head of Postgraduate Instruction, Medical Extension, University of California, Los Angeles 24, Calif.



THE PHYSICIAN'S *Bookshelf*

ESSENTIALS OF DERMATOLOGY—4th Edition—Norman Tobias, M.D., Associate Clinical Professor of Dermatology, St. Louis University, J. B. Lippincott Company, Philadelphia, 1952. 596 pages, 186 figures, 6 subjects in color on 3 plates, \$6.00.

This volume, intended for students and beginners in dermatology, fulfills its purpose even though its very brevity forces the author to make dogmatic statements which could be better qualified if more space were available to him.

The American terminology, keratoderma and erythroderma, for example, should be consistently adhered to rather than the British which occasionally slips in, e.g., keratoderma and erythrodermia. Dermatitis nodularis necrotica is incorrectly linked with both acne conglobata and erythema induratum, totally unrelated diseases. The term "liver spots" is given as a synonym to both tinea versicolor and chloasma, dissimilar disorders. No mention is made of the treponema immobilization test in the discussion of false-positive serologic reactions. The statement that "Ringworm of the scalp does not occur after puberty" should be revised in view of Pipkin's report of many such occurrences. More detailed instructions in regard to treatment could be given if space were saved by omitting many of the rare dermatoses.

The black and white photographs are good. It is unfortunate that the prohibitive cost of colored photographs, so valuable to the beginner in dermatology, has limited the number of them in this volume to six. We hope that future editions can be properly illustrated in color.

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CIRCULATORY DYNAMICS—Physiologic Studies—Carl J. Wiggers, M.D., Sc.D., F.A.C.P., Professor of Physiology, School of Medicine, Western Reserve University, Cleveland, Modern Medical Monographs, No. 4, Grune & Stratton, New York, 1952. 107 pages, \$4.00.

This welcome volume consists of three chapters based upon lectures delivered by Professor Wiggers during the last two years. They represent, therefore, his current views after a long career devoted to physiology of the circulation.

"Basic Hemodynamic Principles in the Interpretation of Circulatory Disorders" discusses what its title promises, with particular attention to arterial pressure and its measurement, the pulse wave and arterial hypertension.

"Determinants of Cardiac Performance" (previously published in identical form in *Circulation*, 4:485-495, October 1951) has to do with Starling's law of the heart and related problems.

"Dynamics of Ventricular Contraction under Abnormal Conditions" (slightly expanded and modified from the version which appeared in *Circulation*, 5:321-348, March 1952) includes information relative to ventricular pressure pulses as altered by a number of clinical conditions including arterial hypertension, pericardial effusion and valvular lesions.

Typography is good, there are extensive bibliographies and an index, and the volume is warmly recommended.

EGO DEVELOPMENT AND THE PERSONALITY DISORDERS—A Developmental Approach to Psychopathology—David P. Ausubel, M.D., Ph.D., Bureau of Research and Service, College of Education, University of Illinois, Urbana, Grune & Stratton, New York, 1952. 564 pages, \$10.00.

This book of over 500 pages is an attempt to present "A systematic and comprehensive developmental theory of psychopathology..." While the presentation considers the Freudian approach, the writer attempts a more eclectic viewpoint, presents the many differences of opinion that prevail in the psychiatric field and attempts to evaluate the various differences of opinion and point out which views are most acceptable. Certain parts of the book are very clearly and simply written; other parts are quite detailed and somewhat difficult to follow. On the whole the author presents a well balanced and scholarly formulation of his material. The reviewer is particularly impressed with the manner in which the hereditary constitutional factors are dealt with and the relative roles assigned to hereditary factors and environmental factors. The book can be recommended to all psychiatrists as a critical evaluation of psychiatric and particularly psychoanalytic formulations. The average reader will find some parts of it very interesting and very helpful, but may find difficulty with some of the formulations. The book will undoubtedly be criticized by orthodox Freudians for not accepting the psychoanalytic view of psychosexual development and for not emphasizing more the role of the unconscious.

* * *

BRAIN TUMORS OF CHILDHOOD—Henry Cuneo, M.D., Assistant Professor of Neurological Surgery, University of Southern California School of Medicine; and Carl W. Rand, M.D., Clinical Professor of Neurological Surgery, University of Southern California, Charles C. Thomas, Publisher, Springfield, Illinois, 1952. 224 pages, \$5.75.

In reviewing the 83 cases of brain tumor treated by them at the Children's Hospital in Los Angeles during the last decade, Cuneo and Rand have made a considerable contribution to the literature concerning this subject. The monograph is of principal interest as a report of the clinical and pathological findings in these patients, some of which are extraordinary, and as a record of the views of the authors on diagnostic and therapeutic approaches to the problems of a similar character. As such the appeal is most to the neurological surgeon and neurologist. Pediatricians will find many points of interest in the sections devoted to early signs of brain tumor in childhood and to differential diagnoses.

It is hoped that the second edition will include all of the children with brain tumors who have come under the care of these authors. Allusion is made to these from time to time, and the result is tantalizing. The added cases should materially enhance the value of the book, and perhaps could provide a firmer basis for some generalizations which at present seem to have inadequate support.

LIVING WITH CANCER—Edna Kaehele. Doubleday & Company, Inc., Garden City, N.Y., 1952. 160 pages, \$2.00.

This small book is an autobiographical account of a woman's physical and emotional reaction to prolonged irradiation for advanced pelvic cancer, presumably a stage IV carcinoma of the uterine cervix. After what most therapists would regard as excessive treatment (56 x-ray treatments, intra-uterine radium, interstitial radon seeds and "radium chloride" by oral and intravenous routes), there ensued a protracted convalescence, even longer than the 15 months of treatment. Six years following treatment, the authoress declares she is well and active though she still has "active cancer."

Although this effort is intended to be an inspirational message for cancer patients, it undoubtedly ranks as the most chilling and macabre account of therapeutic violence and tortured emotional response in the reviewer's memory. It would be impossible to believe, from this saga, that most women pursue their regular daily activities while proceeding with a full course of external irradiation for pelvic cancer, or that they escape mental derangement during their convalescence.

The "message" is intended for those who undergo conventional treatment for cancer and fail to achieve clinical control of their disease. The "discovery" of the authoress is that by a combination of a high protein, high vitamin diet and some ill defined state of faith best described as self-identification with the Deity, one can live indefinitely with "active" cancer. As is common to all anecdotal accounts of a single case of cancer, there is no recognition of the variable natural history of the disease, and the well recognized examples of occasional control of advanced lesions. In fact, what the authoress interprets as "the unpleasant daily manifestations" of her still "active" cancer is probably a euphemistic description of a postirradiation vesicovaginal fistula.

The pages of this booklet offer some evidence of the authoress' narcissism, as in the following quotations: "How little those who passed could know of the storms that beat behind the composed exterior of my face." Or even more significant, "I had the feeling sometimes that the reason I remained alive was that without me, insignificant as I was, the world would not exactly balance, that nature, abhorring a vacuum, would keep me here until my replacement came along."

There are discursive and amateurish references to religion, psychology, and the failure of the medical profession to improve end results in cancer "for the past two thousand years." The book cannot be recommended for any conceivable purpose.

* * *

PSYCHOTHERAPY OF PSYCHOSIS—Gustav Bychow-ski, M.D., Assistant Clinical Professor of Psychiatry, New York University College of Medicine. Grune and Stratton, New York, 1952. 328 pages, \$5.75.

Actually, this book is largely devoted to a discussion of the theories of schizophrenia, with most of the material a discussion of the psychoanalytic theories of schizophrenia. The material given concerning the mechanisms in schizophrenia and the psychotherapy of schizophrenia is, in general, in accord with accepted psychoanalytic material.

The latter part of the book is taken up with the discussion of manic-depressive psychosis and the psychodynamics of elation and depression. Again there is much more discussion of theory than there is of treatment.

The book is hardly suitable for the beginner in psychiatry and the discussion of psychoanalytic theory is not what one would expect to give to the advanced student.

GYNECOLOGIC AND OBSTETRIC PATHOLOGY—With Clinical and Endocrine Relations—3rd Edition—Emil Novak, M.D., D.Sc. (Hon., Trinity College, Dublin; Tulane), F.A.C.S., F.R.C.O.G. (Hon.), W. B. Saunders Company, Philadelphia, 1952. 595 pages with 630 illustrations, 19 in color, \$10.00.

Novak's *Gynecological and Obstetrical Pathology* is too well known to need an introduction. Since it first appeared in 1942 it has been an accepted standard text for teaching. As a cytological atlas it is most useful and has brought universal recognition to the author. It is, therefore, not surprising that a third edition now has appeared.

Novak has made a number of minor changes in the text and has exchanged and added a number of illustrations which enhance the value of the book.

The only major change he has made is the addition of a chapter on the common lesions of the breast, which the author did in response to a request from many of his readers. He feels that this addition is desirable since the general trend among gynecologists is toward the treatment of the diseases of the breasts. In its present form the chapter is probably too brief and could be improved with additional information. In the meantime it calls the subject to the attention of the gynecologists and obstetricians who after all have the greatest opportunity to discover neoplastic disease early and therewith materially can help in improving the cure rate of breast cancer.

As with previous editions the publishers, W. B. Saunders Company, have done a fine job of printing and binding quite in line with the policy of this old and respected publishing house.

* * *

PROGRESS IN OPHTHALMOLOGY AND OTOLARYNGOLOGY—A Quadrennial Review—Volume I—Part One—Ophthalmology—Edited by Meyer Wiener, M.D., and A. Edward Maumenee, M.D.; Part Two—Otolaryngology—Edited by Percy E. Ireland, M.D., and Joseph A. Sullivan, M.D. Grune & Stratton, New York, 1952. 666 pages, \$15.00.

The purpose of this book is to bring the reader up to date on the literature with the least possible effort.

The contributors to the book are competent men in their fields. In the ophthalmology section there are 344 pages divided into 34 sections. These are divided into four parts dealing with first, basic science, second with diagnosis and treatment, third with surgery, and fourth with related subjects.

Each author lists his bibliography and gives the present-day state of our knowledge on ophthalmology.

The book is a good review with very little controversial material and will bring the reader up to date.

The second half of the book deals with the progress made in otolaryngology during the past six years.

There are twenty-eight chapters, each written by an authority in his particular phase of the specialty. All worthwhile literature is covered in an unbiased manner by the author. Controversial subjects are dealt with fairly, with the attempt to give the reader the opinion, not only of the authors, but the general consensus as well.

Each chapter is concise, well written, with a few necessary illustrations to give a picture of the advances in otolaryngology during this period.

The book is not designed as a textbook, but meant to bring the reader up to date in all departments of the specialty. In this it has succeeded admirably.

It fills a definite need and should be useful to the student as well as the practitioner.

It is also most useful as a reference book and should be on the shelf of everyone doing any otolaryngology, either as a general practitioner or as a specialist.

THE ESOPHAGUS AND ITS DISEASES—Eddy D. Palmer, M.D., F.A.C.P., Lt.Col., Medical Corps, U.S. Army, Chief, Gastrointestinal Section, Walter Reed Army Hospital. Paul B. Hoeber, Inc., New York, 1952. 553 pages, \$15.00.

This is an attractive and excellently illustrated book which discusses the esophagus and its disorders in terms of morphologic and physiologic behavior. The emphasis is primarily on a clinical and pathological understanding of the diseases, and the bulk of the book is of medical rather than surgical interest. This is a rather disturbing feature about the book, since nowadays so much of the treatment of esophageal disorders centers around surgical measures. There is not a single illustration, for example, of any of the surgical procedures discussed. Yet, the book covers such disorders as congenital atresia of the esophagus, diaphragmatic hernia, diverticula of the esophagus, rupture of the esophagus, ulcers, strictures, tumors, and varices. Deficiency diseases, collagen diseases, and acute and chronic infections are also discussed. The photographs of x-rays are excellent and the sections on pathology, both gross and microscopic, are well done. This is a book for gastroenterologists who desire specialized knowledge of the esophagus. It is too detailed and expensive for what it contains for student and general practitioner, and it is of value to surgeons only for physiological and pathological discussions. It is not good for technique of surgical treatment. It is a valuable contribution to medical literature and nice to have available as a reference book, but hardly one to buy for everyday use.

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TEXTBOOK OF GYNECOLOGY—4th Edition—Emil Novak, A.B., M.D., D.Sc. (Hon.), F.A.C.S., F.R.C.O.G. (Hon.), Assistant Professor Emeritus of Gynecology, The Johns Hopkins Medical School; and Edmund R. Novak, A.B., M.D., F.A.C.S., Instructor in Gynecology, Johns Hopkins Medical School. The Williams and Wilkins Company, Baltimore, 1952. 800 pages, \$9.00.

The fourth edition of Novak's well-known Textbook of Gynecology has come out with the name of a co-author, Edmund R. Novak, Emil Novak's son and associate. What a rare chance for a son to share an enviable reputation and what a magnificent opportunity to assure continuance of a great teaching text.

Novak's Textbook of Gynecology, like his Gynecologic and Obstetrical Pathology, ranks high on the list of accepted teaching texts. It differs from others because it discusses many subjects in a pleasing informal way, and it is this which makes it particularly attractive to the student. The subject matter is meticulously organized, beautifully illustrated and exhaustively analyzed. The extensive bibliography has been brought up to date and is more than ever a helpful aid to teaching. Practitioners like the text because it is concise but not too brief. In passing, it may be said that the book is principally a guide to diagnosis and a therapeutic aid, leaving the details of surgical technique for others to discuss.

There are no major changes in the new edition, obsolete material has been deleted and all chapters have been brought up to date. Some 40 illustrations have been added and the various bibliographies have been revised. Everett's useful chapter on the common disorders of the female urinary organs likewise has been revised. To review all of the minor changes hardly would further enhance the fine reputation of this text. Besides, it is so well known and so widely accepted that further discussion would be like the proverbial carrying of coal to Newcastle. Novak's textbook recommends itself.

The publishers, Williams & Wilkins Company, have done a most acceptable job in printing and binding the fourth edition.

PHARMACOLOGY IN CLINICAL PRACTICE—Harry Beckman, M.D., Director, Departments of Pharmacology, Marquette University Schools of Medicine and Dentistry. W. B. Saunders Company, Philadelphia, 1952. 839 pages, 152 figures, \$12.50.

Dr. Beckman has recently completed a "folksy" textbook which he calls "Pharmacology in Clinical Practice." He states that this book represents a course in pharmacology which he teaches. He indicates that there is no need for the medical student or doctor to know "the relationship of chemical composition and biological activity" nor to have a consideration of the historical development of this branch of medicine. His approach is certainly in contrast to most medical school teaching of pharmacology. Attempts are being made to base medical education on a scientific foundation rather than on rote memory of specific remedies. As one passes through this book from allergy to venereology one notices that this is in no sense the classic approach to pharmacology. It is a treatment book with the diseases listed and a number of current proprietary drugs discussed or prescribed. The information which is furnished concerning the drug is meager and encompasses that of descriptive literature.

The second section of the book is entitled Drug Data. Fifty-three pages are devoted to a listing of proprietary drugs, the manufacturer and the various dosage forms. It resembles a condensed version of the physicians' desk reference.

This approach to pharmacology is even in contrast to the efforts of the pharmaceutical houses whose entire sales plan is based on promoting an item on the basis of experimentation and scientific facts. These concerns make a concerted drive to incorporate formulae, relationship of drugs and biological activity in their descriptive literature.

* * *

HEALTH INSTRUCTION YEARBOOK — 1952. Compiled by Oliver E. Byrd, Ed.D., M.D., F.A.P.H.A., Professor of Health Education and Director, Department of Hygiene, School of Education, Stanford University. Stanford University Press, Stanford, Calif., 1952. 232 pages, \$3.50.

The Health Instruction Yearbooks are a series which cover the period from July 1 to the succeeding June 30. Thus the Yearbook for 1951 reviewed the health literature of 1950-51 and the Yearbook for 1952 digested the literature from July 1, 1951, to June 30, 1952.

Dr. Byrd with both a medical and educator's background is uniquely fitted to accomplish his ambitious undertaking. Carefully scanning over a hundred professional journals, commission and committee reports, out of nearly 2,000 articles he selects approximately 300 for condensation. However, they are not presented as disconnected abstracts. Instead, they are grouped in a score of chapters such as "Health as a Social Accomplishment," "Mental Health and Disease," "Infection and Immunity," "Health Services and Facilities," "School Health," "International Health," "Trends and Possibilities." Each chapter begins with a keynote summary, after which the abstracted articles appear in logical order. The bibliography, author and subject index facilitate cross references. It is of some interest that the *New York Times*, *Journal of the American Medical Association* and *Congressional Record* (in order named) provide the largest number of articles.

With the increasing interest and activity of physicians in community affairs, these Yearbooks serve as excellent sources for talks and addresses. Moreover, in a very readable form, they keep the physician abreast of the times with a very broad spectrum of medical achievement. The annual purchase of the Yearbook is a habit which, while very inexpensive, will be very rewarding.

RESEARCH IN ENDOCRINOLOGY—August A. Werner, M.D., Assistant Professor of Internal Medicine, St. Louis University School of Medicine; edited by Al R. Schmidt, City Editor, Belleville Daily Advocate, Belleville, Illinois. A. A. Werner, M.D., 403 Humboldt Bldg., St. Louis, Mo., 1952.

As stated in the foreword by Paul Reinert, president of St. Louis University, this book represents a partial record of Dr. Werner's activity in scientific medicine and as a physician. In this scientific autobiography we are given the life history of Dr. Werner, his family background, and early education. Nine of his major research problems are set forth in brief abstracts, comprising the hypo-ovarian syndrome; climacteric psychosis; the male climacteric; the effect of theelin injections on castrate women; the production of endometrial growth in castrate women, the minimum dosage of theelin that is required; effective clinical dosages of theelin in oil, based on the study of 16 castrate women; a survey of estrogenic dosage on the premenstrual endometrium; effect of gonadotropic extract on the anterior pituitary in cryptorchidism; growth in children with mongolism. The statement of the basic problem is then followed by a corresponding brief summary of how the problem was attacked, and finally each one of these problems is represented again as the original reprint bound into one volume.

For the most part the scientific material is now either part of textbooks or else it is outdated. Consequently, this book will be of no help to the student or practitioner as a source of reference, but it does stand as a monument to an able, early, pioneering endocrinologist and a devoted physician.

* * *

TEXTBOOK OF OPHTHALMOLOGY—Volume V—The Ocular Adnexa—Sir Stewart Duke-Elder, Surgeon Oculist to the King, Knight of Grace, Order of St. John, Consulting Ophthalmologic Surgeon to the British Army and Royal Air Force, Director of Research, Institute of Ophthalmology, University College, London. The C. V. Mosby Company, St. Louis, 1952. 1083 pages, 1181 illustrations, 32 in color, \$22.50.

The volume is composed of 1083 pages divided into sections. These parts deal with (1) developmental anomalies, (2) diseases of the lids, (3) diseases of the lacrymal apparatus, (4) diseases of the orbit, (5) diseases of the periorbital regions. This book, like his previous books, is carefully documented with an extensive and authoritative bibliography. This has been so carefully done that his books are encyclopedias.

The multiplicity of anomalies and diseases described in the book are rarely seen except by a composite group of ophthalmologists.

To review this book in detail would involve too much space. Suffice it to say that this, like the preceding volumes, is a must for ophthalmologists' shelves. It is a dictionary for ophthalmology, including disease found in all parts of the world.

* * *

A METHOD OF ANATOMY—Descriptive and Deductive—5th Edition—J. C. Boileau Grant, M.C., M.B., Ch.B., F.R.C.S. (Edin.), Professor of Anatomy in the University of Toronto. The Williams and Wilkins Company, Baltimore, 1952. 870 pages, \$7.00.

This is the fifth edition of a well-received textbook on anatomy, and it continues to deserve its previous widespread acceptance. It considers the human body by regions, and emphasizes the predominant features of each region. This gives the book a much more practical significance since it enables the correlation of anatomy with clinical problems. The illustrations are line drawings, but clear and quite well done, and bring out the features discussed in the text. Much useful new information has been added to this book.

consisting essentially of data that would be useful to the practicing physician. For example, reference is made to radiograms of the wrist as a guide to skeletal age, to nerve supply of various joints, to the segmental anatomy of the lung, and to the mechanisms of swallowing. This book can still be recommended as a concise exposition of practical anatomy for both students of anatomy and the practicing physician.

* * *

THE WHITE PLAGUE—Tuberculosis, Man and Society. Rene and Jean Dubos. Little, Brown and Co., New York, 1952. \$4.00.

The history, past, present and future, of tuberculosis, the greatest enemy of the human race, is presented vividly and authoritatively by veterans in the war against it. The effect of tuberculosis on many of its famous victims, the development of man's knowledge of its diagnosis and its origin, the evaluation of therapeutic measures and of other factors affecting its control, are described with enthusiasm tempered with scientific caution. Thus the conclusion that "tuberculosis mortality slowly decreased during the latter part of the 17th century . . . and began to increase again around 1730 . . . and reached a maximum in England and America at the end of the 18th and during the first part of the 19th century" is balanced by the admission that "it is not easy to evaluate the prevalence of the disease from a study of written documents," and by citation of figures showing that the changes referred to were merely relatively small differences, in the continuously enormous mortality, from one tenth to one fifth of all persons dying of tuberculosis in most of the data recorded. Although "historical and epidemiological evidence supports the clinical view that the individual's nutritional state is of paramount importance in tuberculosis," it is emphasized again that "suggestive as they are, these correlations are not entirely convincing." Nevertheless, it is maintained, with little attempt at verification, that "Some mismanagement of the human machine must occur before the bacilli succeed in gaining a permanent foothold and in causing extensive ravages."

A critical discussion of vaccination against tuberculosis leaves its practical value still unsettled, but praises BCG as a "symbol of those generous impulses which help to create a better world." The need for more case finding efforts is stressed by pointing out that "some 30 per cent of the individuals who die of tuberculosis . . . are not reported as tuberculous during life." Despite the "extremely thin evidence" upon which the theory of epidemic waves is based, and recognition that "the downward trend did not begin exactly at the same time . . . in all the different countries," the authors insist that "tuberculosis began to decrease long before any special measures had been instituted against the disease." But "cycles are determined by natural causes and some of these can be altered by human intervention," so they discuss alleged changes in virulence in the organism and in hereditary predisposition or acquired immunity, but do not stress the institutional segregation which Newsholme and Frost pointed to as determining the decrease both of tuberculosis and of leprosy. It is pointed out, however, that "only those communities which have carried out systematic and sustained antituberculosis campaigns have come close to eradicating the disease."

Appendices graphically presenting the salient facts regarding tuberculosis trends in relationship to pneumonia, industrialization, war, age, sex and race, and a stimulating bibliography and commentary in the form of notes which are, in many places, even more fascinating than the text itself, with an index including hundreds of the names which have made up tuberculosis history, completes this valuable contribution to the literature of the white plague.



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American Medical Association President Lists Medicine's Major Objectives for 1953

Dr. Louis H. Bauer, Hempstead, N. Y., president of the American Medical Association, recently outlined a constructive nine-point program for what he called "the preservation of our American system of medicine." His nine points, directed to all physicians and to all component societies of the American Medical Association, are:

1. Work with rural communities to establish facilities for physicians, so that we shall have a better distribution of physicians.

2. See that good medical care for the indigent is available everywhere, just as it is in some states.

3. Extend public health coverage to areas lacking it.

4. Develop plans for the care of the chronic invalid.

5. Expand our voluntary insurance program, not only to cover more persons, but to cover those over age 65 and those suffering from illness of long duration.

6. Clean our own house, by disciplining those physicians who are tarnishing the reputation of the whole profession by their unethical acts of overcharging, accepting kick-backs, and making commercial arrangements with pharmacists.

7. See that the public is protected so that they can always obtain the services of physicians.

8. Revitalize our county societies and make them leaders in their communities in all health matters.

9. Inculcate the newly trained physicians in the tradition and ethics of medicine.

Dr. Bauer said that there also are "certain legislative matters that will require our attention and earnest study." He listed them as follows:

1. The establishment of a department or independent agency of health in the federal government. It must not be tied in with education or social security. Health is important enough to warrant an agency by itself.

2. The making of constructive suggestions for the solution of the problem of the totally disabled under the social security law.

3. Obtaining sufficient physicians for the armed forces, without injustices or upsetting civilian medical care programs.

4. Enactment of a law allowing pensions or retirement privileges for the self-employed, along the lines of the Reed-Keogh bill introduced in the last Congress.

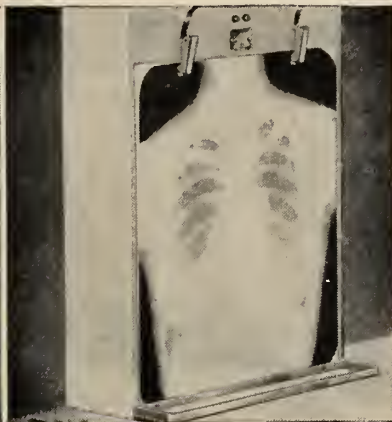
"Another matter, which may not require legislation," Dr. Bauer said, "is a solution of the problems related to the Veterans Administration.

"These are a few of the matters that will engage our activities in the immediate future. They will require the labors and cooperation of all our constituent and component units, as well as the support of the individual members of the profession."

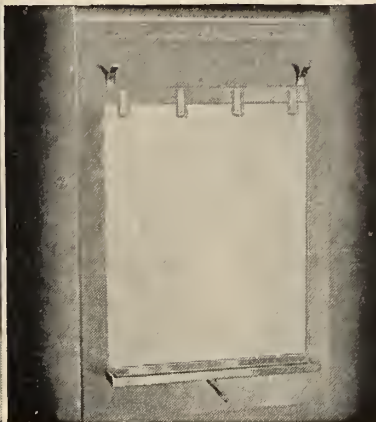
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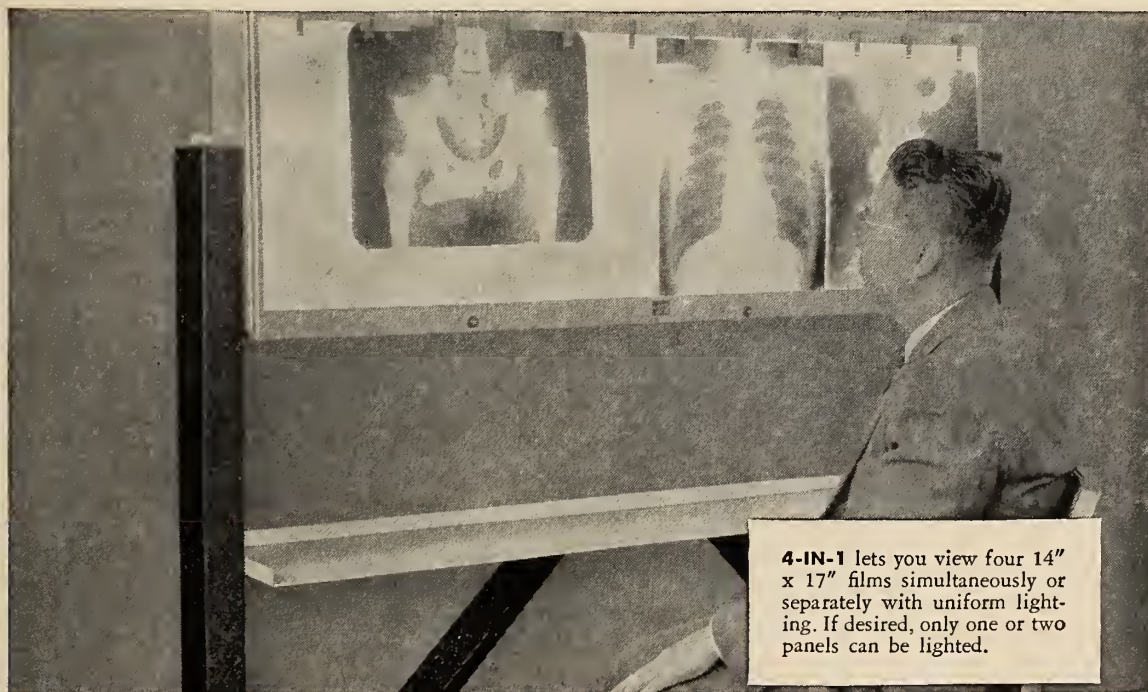
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Hormone Drugs Aid in Treating Type of Anemia

Use of corticotropin (ACTH) and cortisone in combination with other forms of therapy has greatly improved the outlook of patients with acquired hemolytic anemia. it was reported in a recent issue of the *Journal of the American Medical Association*.

This disease, an anemia due to rapid destruction of red corpuscles, is sometimes fatal. The basic cause of the disorder is obscure; it has no particular age predilection, but seems to afflict more females than males.

"During the past two years, the treatment of acquired hemolytic anemia has been advanced considerably, owing to the introduction of corticotropin and cortisone," it was stated by Dr. Milton S. Sacks, Dr. Joseph B. Workman and Elso F. Jahn, B.S., Baltimore. All are associated with the department of medicine, University of Maryland School of Medicine and the Baltimore Rh Laboratory.

They reported on a study of 19 persons afflicted with the disease who received the drugs in addition to other forms of treatment. Several of the patients

(Continued on Page 51)

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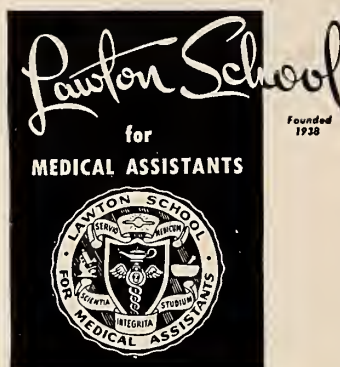
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Hormone Drugs Aid in Treating Type of Anemia

(Continued from Page 50)

had remissions following treatment with blood transfusions and the hormones, and no relapses occurred. Significant improvement was noted in many other cases, according to the authors, although removal of the spleen was required in some instances.

"There is no doubt in our minds that, but for the availability of this form of treatment, some of these patients would be dead," they pointed out.

Describes New Procedure to Correct Chest Deformity

A new surgical procedure to correct the funnel chest deformity by the use of rib grafts was described in a recent issue of the *Journal of the American Medical Association*.

This operation was performed for the first time on a 13-year-old girl more than four years ago, according to Dr. James E. Dailey, Houston, Texas, who developed the technique. A follow-up study of the case has shown that the graft has remained com-

(Continued on Page 56)

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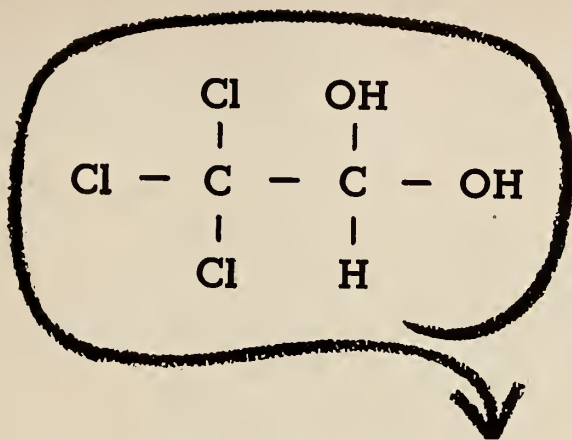
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¹ Hyman, H. T.: An Integrated Practice of Medicine (1950)
² Rehfuss, M. R. et al.: A Course in Practical Therapeutics (1948)
³ Goodman, L., and Gilman, A.: The Pharmacological Basis of Therapeutics (1941), 22nd printing, 1951.
⁴ Soliman, I.: A Manual of Pharmacology, 7th ed. (1948), and Useful Drugs, 14th ed. (1947)

Describes New Procedure to Correct Chest Deformity

(Continued from Page 51)

pletely fused and is functioning properly, with no shrinkage or loss of structure. In addition, physiological disturbances resulting from the deformity have been corrected.

Under the new procedure, the ninth rib on the right side of the patient is removed and the wound closed. A chest incision is then made, the breastbone elevated to normal position, and the rib placed beneath the breastbone to support it. The rib graft is anchored to the second rib on the right side and the third rib on the left side by means of encircling wires. The incision is closed.

The success of this technique, Dr. Dailey stated, might suggest use of such a graft in other orthopedic or plastic procedures where bridging a gap is necessary. Although the graft was accomplished

by removing and using a rib from the patient, Dr. Dailey added that such a graft may be possible by using a rib from a bone bank.

Patients with funnel chest deformities are divided into two groups: those less than 24 months of age who require a simple operative procedure, and those patients older than 24 months, in whom the deformity is fixed and a more extensive procedure necessary. The new technique is applicable to the latter group.

Correction of such a deformity is necessary, Dr. Dailey pointed out, to correct heart and respiratory symptoms, and psychological complaints.

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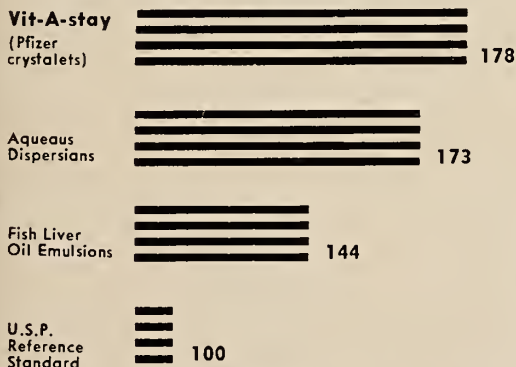
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Premature Babies' Chances of Survival Increasing

Nine out of ten premature babies born today have a chance to survive.

Modern science and great medical advances during recent years have made this possible, according to Dr. Edith Potter, Chicago, who is associated with the department of obstetrics and gynecology, University of Chicago, and the Chicago Lying-In Hospital.

However, she added, research is constantly being carried on to find additional ways to prevent prematurity and help the premature baby adjust to his new surroundings and to attain normal babyhood.

Approximately a quarter of a million babies are born prematurely in this country each year, Dr. Potter stated in an article in a recent issue of *Today's Health*, published by the American Medical Association. She said prematurity is generally based on the weight of the child at birth, and that those weighing less than five and one-half pounds are considered premature babies.

Although there are many reasons for premature births, in more than one-third of all such cases no cause can be found, Dr. Potter pointed out. Some of the known reasons for such births given by the doctor were multiple birth, hard physical work by the mother during the latter months of pregnancy, improper development of the child, hormone deficiency in the mother, an abnormality of the mother's uterus, and the mother's being underweight at the beginning of pregnancy and not gaining normally during the first few months.

"In general, the healthier the mother and the more complete her diet in required minerals, vitamins and proteins, the less likely she is to have a premature infant," Dr. Potter stated.

The care of a premature infant, a great factor in its survival, is very intricate, Dr. Potter wrote. A premature baby is immediately put into a heated crib or incubator to protect it from chilling. Oxygen is administered if necessary. The mouth, throat and air passages to the lungs are carefully cleaned out. All food and articles of clothing are sterilized. Only special nursing personnel is permitted near the child, which is kept in a special nursery until it weighs five and one-half pounds.

The principal reason that some premature babies do not survive, according to Dr. Potter, is that their lungs are not sufficiently developed. Other reasons include extreme susceptibility to disturbances in the lungs, injury before birth resulting from the partial cutting off of the oxygen supply received from the mother through the umbilical cord, bacterial infections of the lungs, stomach and intestines or skin, and Rh incompatibility.

Dr. Potter stressed the fact that "the majority of premature babies who live are not handicapped by their prematurity."

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1. Steinbrocker, O.; Berkowitz, S.; Ehrlich, M.; Elkind, M., and Carp, S.: Paper read before the Annual Meeting of the American Rheumatism Association, Chicago, Ill., June 6, 1952.

2. Kuzell, W. C.; Schaffarick, R. W.; Brown, B., and Mankle, E. A.: J.A.M.A. 149:729 (June 21) 1952.

3. Smith, C. H., and Kunz, H. G.: J. M. Soc. New Jersey 49:306, 1952.



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Describe Three New Insulin Preparations

Three new long-acting insulin preparations, which offer promise in reducing the complexities of insulin administration to diabetics, were described in a recent issue of the *Journal of the American Medical Association*.

The new preparations, consisting of insulin mixed with small amounts of zinc, have activity ranges from about 18 to more than 30 hours, according to K. Hallas-Moller, Ph.D.; M. Jersild, M.D.; K. Petersen, M.Sc., and J. Schlichtkrull, M.Sc., of Copenhagen, Denmark.

According to the authors, preliminary studies of 65 patients with severe cases of diabetes have shown "that satisfactory blood sugar control can be ob-

tained in such patients with a single injection of the appropriate one of the three types of zinc insulin."

They reported that the currently available insulin preparations with protracted action, if given in one daily injection, are incapable of providing satisfactory regulation of the blood sugar level in a considerable number of patients with difficult cases of diabetes.

"The results we have attained indicate that these zinc insulin preparations may offer a solution to the problem of providing a single daily injection for such patients," they added.

Zinc insulin was given to the patients daily at 8 a.m. The amounts of insulin varied according to individual reactions to the drug.

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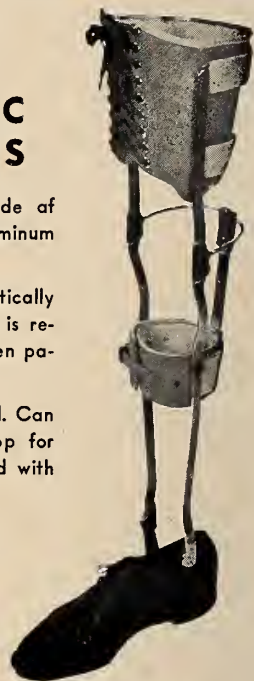
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Reports Success of Emergency Medical
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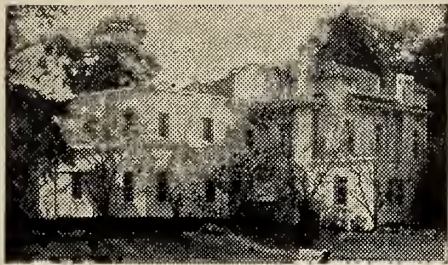
A layman does recognize a medical emergency when he sees one, and does not take advantage of an emergency medical call plan, according to Robert A. Potter, executive secretary of the Medical Society of the County of New York.

Mr. Potter, who directs the society's Doctor's Emergency Service, stated that experience has been that the "number of hypochondriacs or persons with trivial requests for emergency medical care is not excessive. Before a patient will apply for emergency

medical care, he is really ill. His judgment as to the seriousness of the illness is usually justified."

Writing in a recent issue of the *Journal of the American Medical Association*, Mr. Potter pointed out that the Doctor's Emergency Service is available to 2,000,000 permanent residents and some 17,000,000 annual visitors to the island of Manhattan. During the calendar year of 1951, more than 4,500 house calls were made by 250 physicians of the service.

Mr. Potter stated that the greatest number of requests were received over the weekends and on holidays, and the peak volume of emergency calls came between 9 p.m. and 2 a.m.



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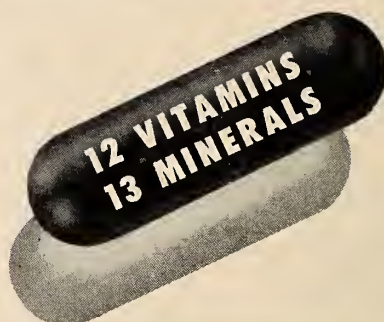
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Use of Mild Nose Drops Desirable

Mild nose drops that offer relief from nasal congestion and the common cold can be used for short periods of time without fear of harmful effects, and are desirable to relieve the uncomfortable feeling brought on by such conditions, in the opinion of Dr. Noah D. Fabricant, Chicago.

It is important that the nose drops be of the type which revert the abnormal alkaline mucus of the nose to its original, slightly acid state, Dr. Fabricant wrote in a recent issue of the *Journal of the American Medical Association*. Dr. Fabricant is associated with the department of pathology, Mount Sinai Hospital, and the Mount Sinai Medical Research Foundation.

Use of the wrong type of strong nose drops may disturb the normal nasal passages, may enhance irritation of the nasal mucous membrane, and may postpone the return of the nasal mucosa from its abnormal alkaline status to a normal, slightly acid status, according to Dr. Fabricant. This slightly acid state acts as a barrier against infection, he explained.

Dr. Fabricant reported on a study of 40 rabbits which were treated for 30 days with nose drops in the right nasal passages, while they received no medication in the left nasal passages. Results showed that strong nose drops are more likely to produce injury and suppurative nasal mucosal changes than are mild preparations.

The mucous membrane of the nasal cavity is continuously subjected to the lashings of acute nasal infections, weather conditions, allergens, smoke, dust and chemical substances, which can cause the mucus to change from acid to alkaline, Dr. Fabricant pointed out.

In addition, alkalosis can be caused by emotional disturbances such as rage, sorrow, fatigue, excitement and apprehension, he stated. Neurologic disorders, anxiety neuroses and hysteria also can cause such changes in the nasal mucous membrane.

"Nasal vasoconstrictors occupy a commanding position among the various therapeutic measures employed by the general public for the relief of nasal congestion and the common cold," Dr. Fabricant wrote.

"Although ensuing relief is temporary, overcoming the discomfort caused by intranasal obstruction is welcome to distraught patients. There is little to indicate that the current passion for psychosomatic phraseology will alleviate millions of inflamed and allergic American noses.

"Intranasal treatment of the human nasal cavity by means of rational, physiological nasal medication requires not only treatment of mucous membrane surfaces, but also treatment of nasal secretions.

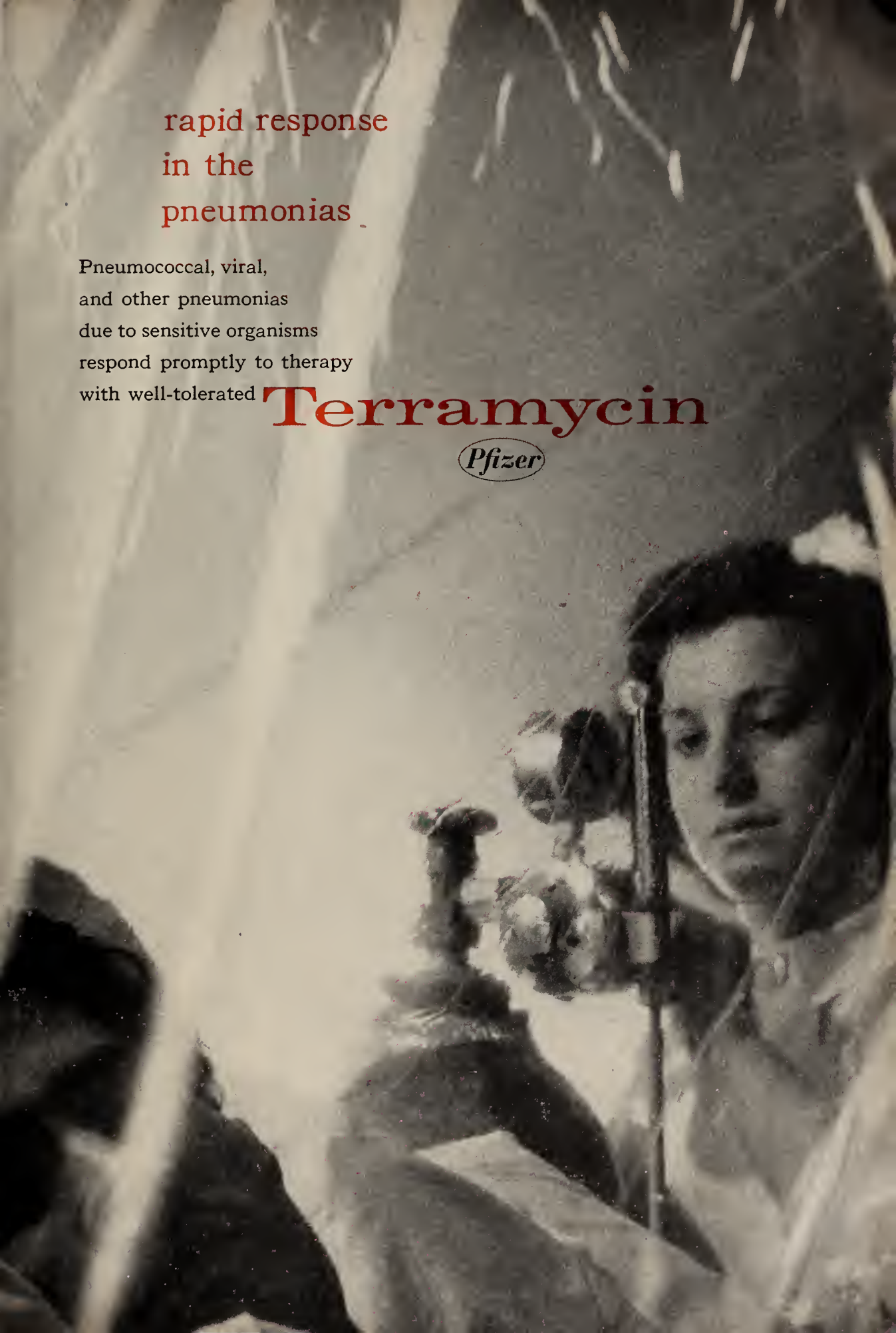
"During an attack of acute rhinitis, acute sinusitis and the more active stages of allergic rhinitis, the employment of a nasal vasoconstrictor that lowers the abnormal alkaline state in these conditions to a normal, slightly acid level is most desirable."

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(Continued from Page 70)

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Eyestrain a Result of Progress

Eyestrain, in many instances, is the price we must pay for progress.

The demands of our complex civilization have made us acutely aware of our eyes, in the opinion of Dr. Louis J. Girard, a New York ophthalmologist. People who consult an eye doctor today frequently complain that their eyes feel strained or tire easily, or that they get headaches when they read.

"A popular misconception is that people of the present generation have weaker eyes than in past generations," Dr. Girard wrote in a recent issue of *Today's Health*, published by the American Medical Association.

"Why do so many people complain about their eyes nowadays? The answer is simple. The demand for acute vision is far greater in this highly complex civilization. Our eyes are no worse and, in some respects, are better than those of previous generations."

Dr. Girard gave several reasons for eyestrain. The most common reason is a refractive error that calls for glasses. Undercorrected farsightedness, astigmatism, presbyopia or "old sight" and overcorrected nearsightedness may produce eyestrain symptoms. Proper glasses can correct these types, he added.

Muscle imbalance, a disturbance in the delicate eye muscles that synchronize the movements of both eyes, was the second reason given by Dr. Girard. Such afflictions can be alleviated by proper glasses, certain eye exercises and, sometimes, by surgery. A less common cause is a condition known as aniseikonia, which means unequal images are seen by the two eyes. Again, glasses can correct the difficulty.

Other reasons for eyestrain enumerated by Dr. Girard were prolonged use of the eyes, improper illumination, and such organic eye diseases as conjunctivitis, glaucoma and uveitis.

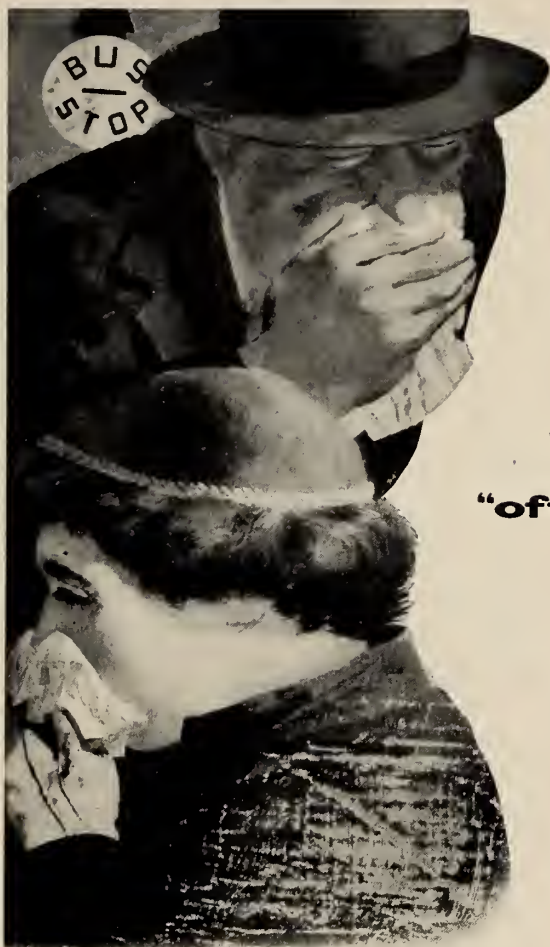
Eyestrain will not permanently damage the eyes, Dr. Girard pointed out, adding:

"Continuing to strain the eyes when eyestrain symptoms are present can certainly aggravate the condition, but it has not been known to produce organic changes in the eyes. It is not thought that the eye is capable of straining itself into permanent damage."

As for watching television, Dr. Girard stated that it is "inconceivable that the television screen would harm the eyes of a person on the other side of the room; television contains no harmful rays."

"Watching television to excess can cause symptoms of eyestrain, but not permanent injury," he said. "If the viewer needs glasses, has aniseikonia or a muscle imbalance, he is even more likely to get symptoms of eyestrain. But if the eyes are normal or defects have been properly corrected, no symptoms will result from watching television.

"Knowing this, common sense should dictate the length of time anyone should spend gazing at the television screen."



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Rabies Danger Greater Than Risks Of Vaccine Side-Effects

The risk of rabies from a bite is greater than the risk of side-effects from antirabies vaccine.

Therefore, there should be no hesitation in the use of antirabies vaccine when a person is bitten by a rabid animal, a suspiciously rabid animal or by a stray dog than cannot be apprehended. This is the opinion of Drs. Emanuel Applebaum, Morris Greenberg and Jack Nelson, New York. They are associated with the bureaus of laboratories and preventable diseases, New York City Department of Public Health.

The doctors stated in a recent issue of the *Journal of the American Medical Association* that in New York City from 1928 to 1951 there were only 46 cases reported of inflammation of the brain, spinal cord or peripheral nerves following injections of antirabies vaccine. Twenty-one of the persons afflicted were among the 42,525 persons treated with antirabies injections at the New York City Department of Health between 1935 and 1951—an incidence of one side-effect to 2,035 persons treated. Data on the source of treatment for most of the other cases could not be obtained.

According to the doctors, in New York City from 1935 to 1948, 707 persons were bitten by rabid animals, with all but eight victims taking antirabies treatment. Six cases of human rabies developed during this period, all of which were fatal; only two persons who had received antirabies vaccine died. There were no fatalities from the neuromuscular accidents following antirabies treatment.

Onset of the paralytic accident usually occurred suddenly between the eighth and 21st day after the initial injection, the doctors stated. Recovery occurred, for the most part, in one or two weeks.

Of the 45 patients on whom a follow-up study was made, 29 (64 per cent) made a complete recovery, while 16 (36 per cent) had some residual condition, none of which was severe enough to prevent the affected person from resuming his usual occupation.

Twenty-three of the patients who suffered from paralytic accident were children between the ages of 3 and 14 years; 36 were males. The greater the number of injections, the higher the percentage of side-effects, the doctors' survey disclosed.

Since the use of antirabies vaccine exposes the persons treated to the risk of side-effects, fairly rigid criteria for its administration should be established, the doctors stated. There is little evidence that persons in contact with or scratched by a rabid animal will have rabies, unless they actually are bitten. Therefore, there is no good reason for advising treatment with antirabies vaccine in such cases, they added.

"The New York City Department of Health at

(Continued on Page 16)

Monthly Penicillin Therapy Prevents Recurrences of Rheumatic Fever

Routine year-round prevention against recurrences of rheumatic fever with orally administered penicillin was advocated in an article in a recent issue of the *Journal of the American Medical Association*.

A five-year study of children suffering from rheumatic fever has confirmed reports that 200,000 units of penicillin given four times a day for seven consecutive days the first week of each month will reduce significantly the number of recurrences of the disease. The study was made by Dr. Kate H. Kohn, Dr. Albert Milzer and Helen MacLean, A.B., Chicago, all of whom are associated with the departments of microbiology and cardiovascular research, Medical Research Institute, Michael Reese Hospital.

"The natural history of the disease, with its high recurrence rate and serious sequelae, makes prophylaxis imperative," the authors stated.

"The rheumatic child should receive routine year-round penicillin prophylaxis through puberty and possibly, if exposure to concentrated streptococcal infection is great, until the age of 25.

"In the last two years of our study, more than one-third of the recurrences occurred in children aged 13 years or older. The great number of cases of rheumatic fever in the armed services during World War II also demonstrates the need of continuing prophylaxis well into adult life."

Routine monthly courses should be supplemented by semimonthly courses during the time of year when the infection is most prevalent, the authors added. As an example, they cited that approximately 50 per cent of the recurrences in the Chicago area occurred during February and March.

The children studied lived at home, attended public schools, and led normal lives in so far as their heart status permitted, the authors pointed out. Some of the children received the monthly penicillin therapy, while the remainder received no treatment and acted as a control group.

During the third year of the study, there were no recurrences among the treated group, as against 20 recurrences in the control group, the article reported. There was one recurrence in the treated group during the fourth year, compared to 26 in the control group. In the fifth year, one recurrence occurred in the treated group; 19 occurred in the control group.

Oral penicillin was well tolerated, and no allergic reactions occurred in any of the treated group, according to the authors. In no instance was bacterial resistance to penicillin observed.

"The rationale of using monthly courses of penicillin rather than daily administration is that it seems to us safer and more practical," they added. "Our results demonstrate its effectiveness. It is relatively easy to remember, it is less costly, and it gives the patient a rest period from antibiotic effect."

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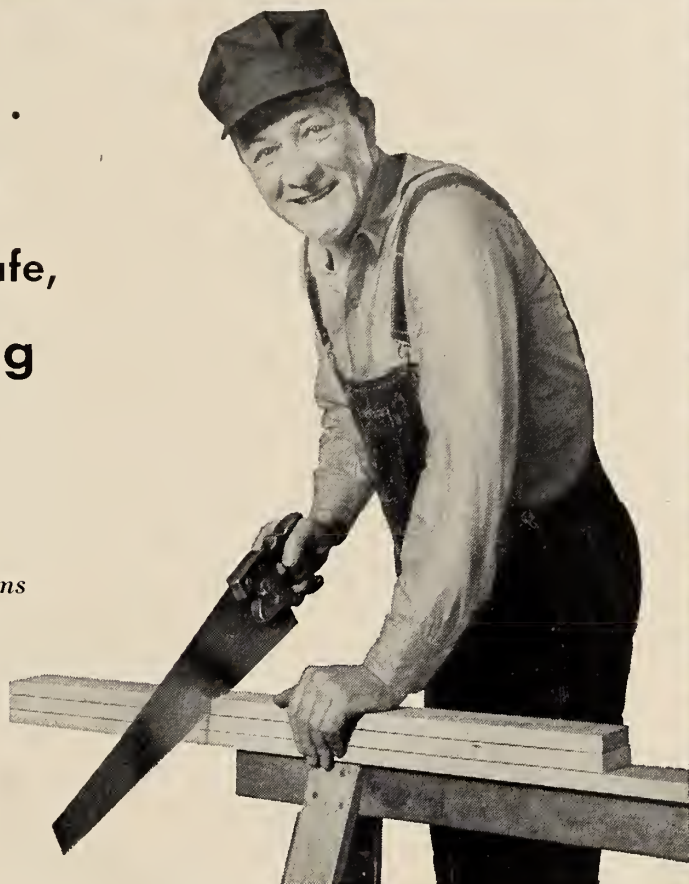
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Rabies Danger Greater Than Risks Of Vaccine Side-Effects

(Continued from Page 10)

present advises antirabies vaccination only after a bite by a rabid animal, by a suspiciously rabid animal until its status has been determined, or by a stray dog that cannot be apprehended," the doctors wrote. "Known dogs or cats that bite humans are observed for one to two weeks, and, unless rabies develops in them, no treatment is advised.

"No treatment is advised after bites by squirrels,

rats or other animals, since no cases of rabies have been found among them in the city. Since 1949, no cases of rabies in man or beast have occurred in the city. If this record continues, the advice to take treatment after a bite by a stray dog or cat may have to be reevaluated."

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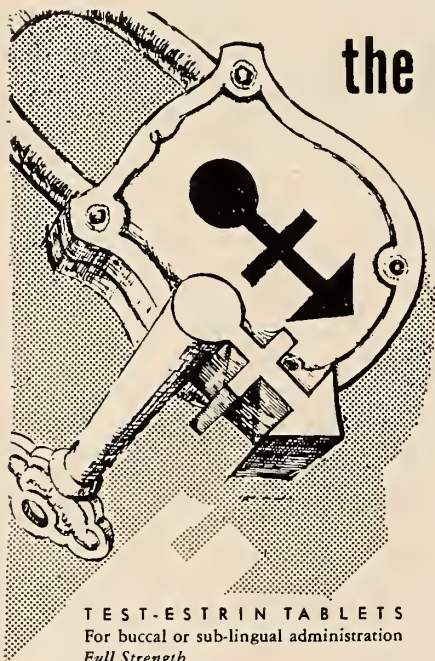
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Persistent Hoarseness May Be Danger Signal

Hoarseness can be dangerous. Although hoarseness is a common unpleasantry experienced by everyone at one time or another, it can be a danger signal, according to Dr. Robert W. Ard, Hagerstown, Md. When it persist for more than two weeks, it may be more than laryngitis—it may even be cancer. Hoarseness usually is a temporary voice defect associated with simple upper respiratory infections. Dr. Ard wrote in a recent issue of *Today's Health*, published by the American Medical Association. "However," he added, "such infections aren't the

only cause of hoarseness. Other diseases, notably cancer, tuberculosis and syphilis, may give rise to this voice difficulty. Unlike laryngitis, these vicious illnesses are not of brief duration. "Their nature is chronic, not acute. Self-medication of such disorders is totally ineffective and only serves to delay necessary diagnosis and treatment. Cancer of the larynx, in particular, must be discovered while the growth is still small and before it spreads to other organs if surgical removal is to bring a cure." Anyone who has hoarseness for more than two weeks should have a thorough medical examination, including a direct examination of the vocal cords.



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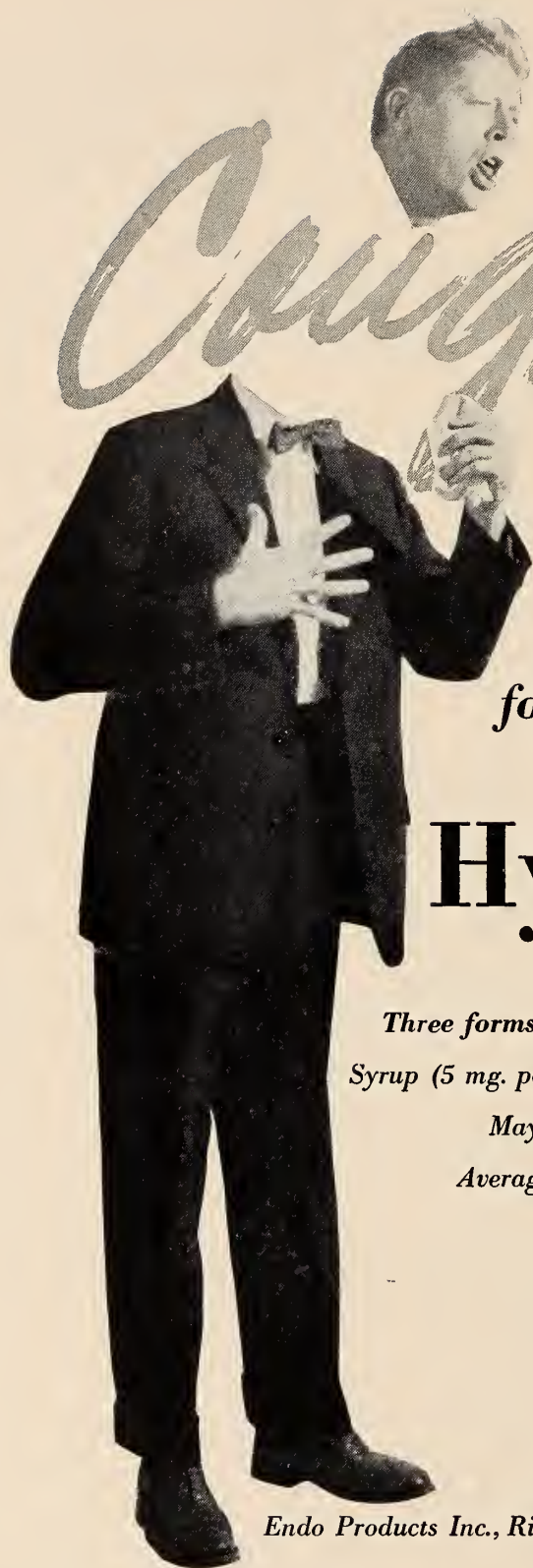


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Report Brain Operation Aids Chronically Mentally Ill

Bilateral prefrontal lobotomy is capable of aiding the return of chronically mentally ill patients to the community, it was reported in a recent issue of the *Journal of the American Medical Association*.

This opinion was expressed by Dr. Milton Greenblatt, E. Emily Robertson, M.S., and Dr. Harry C. Solomon, Boston, following a five-year study of the first 100 patients on whom the operation was performed at the Boston Psychopathic Hospital. The authors are associated with the hospital, and with the department of psychiatry, Harvard Medical School.

Bilateral prefrontal lobotomy is an operation which severs nerve fibers of the front part of the brain to keep certain nerve impulses from reaching the brain.

At the end of five years, 40 of the 100 patients were residing in the community, 45 were in hospitals, 12 had died, and three could not be traced, according to the authors. Only two of the deaths were related to the operation, they added.

Twenty-nine per cent of the patients on whom information was available were considered to be making good work adjustment at the end of the five-year period, as compared to two per cent prior to the operation. This meant that they were earning a salary and that their performance satisfied their employers if engaged in labor; if engaged as housewives, they were working full time and satisfactorily, as far as their relatives were concerned.

Thirty-four per cent of the patients were considered by the doctors to have made fair adjustments following the operation. This consisted of partial remission of most if not all symptoms, or complete remission of at least a few important symptoms. The condition of 37 per cent of the patients remained essentially unchanged.

"The results indicate that bilateral prefrontal lobotomy is capable of effecting a rise in the level of adaptation of chronically mentally ill patients and that this rise is generally sustained over a five-year period," the authors stated.

"Improvement in these patients is striking when their condition is compared to their preoperative state of deterioration; however, in most cases, improvement is not sufficient to reach the pre-illness level of adaptation."

The authors pointed out that convulsive seizures occurred in 12 per cent of the patients, but that these were usually few in number and readily controlled by anticonvulsive therapy.

The operations were performed between October 1943 and April 1946. All the patients had suffered from chronic mental illness for an average duration of six years; the prognosis of the disease was considered hopeless. Most of the patients were skilled laborers, clerical employees and housekeepers.



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Report Favorable Response to New Antihypertension Drug

Apresoline,[®] a relatively new drug, offers promise in the treatment of chronic high blood pressure, it was reported in a recent issue of the *Archives of Internal Medicine*, published by the American Medical Association.

More than half of 97 persons suffering from the affliction who were given the drug showed a favorable response, according to Drs. R. D. Taylor, Harriet P. Dustan, A. C. Corcoran and Irvine H. Page, all of Cleveland. The doctors are associated with the

research division of the Cleveland Clinic Foundation and the Frank E. Bunts Educational Institute.

Twenty-four of the patients achieved a persistently normal (between 60 and 90) diastolic blood pressure following Apresoline therapy, the doctors stated. In 33 other cases, diastolic blood pressure reached levels persistently less than 110 and often less than 100. Although the remaining patients were considered therapeutic failures, several showed some measure of improvement.

The relatively high incidence of good responses in patients whose hypertension probably originated in

(Continued on Page 32)

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antispasmin is the most potent of a large series of spasmolytic substances synthesized by Rosenmund and coworkers.³ Outstandingly effective in the control of spasm associated with peptic ulcers, gastritis, colitis, cardiospasm, dysmenorrhea, and other conditions involving smooth muscle spasm.^{2,4,5}

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1. Kulz, F. and Rosenmund, K.W., *Klin. Wchnschr.*, 17:344 (1938).
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Report Favorable Response to New Antihypertension Drug

(Continued from Page 26)

the nervous system accords with the concept that the drug may specifically counteract a chemical, originating in the brain, which is released into the blood stream and causes a rise in blood pressure, the doctors said.

The patients were treated with the preparation for at least three months, and usually for 12 or more months. Fifty-eight were hospitalized for close observation; these, as a group, were more severely ill than the 39 outpatients, according to the authors.

Apresoline was found to be most effective and best tolerated when taken four times daily, after meals and at bedtime. Dosage began at 25 milligrams four times a day, and was increased gradually until blood pressure decreased or to a maximum of 300 milligrams daily. Some favorable responses did not appear until the drug had been taken for four to five weeks, they added.

While a majority of the younger patients showed dramatic improvement following Apresoline therapy, in heart complications resulting from the chronic

(Continued on Page 33)



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Report Favorable Response to New Antihypertension Drug

(Continued from Page 32)

high blood pressure, some of the older patients did not respond well.

Toxic effects from the drug appeared in a majority of the patients, the doctors pointed out. However, in 83 per cent of those affected, the symptoms disappeared spontaneously or were controlled by other drugs within three to six weeks. The reactions included headaches, swelling of the eyelid or ankle, palpitation, giddiness, a pain in the chest upon effort, nausea, vomiting, and a gripe-like feeling.

Black Eye Not Funny; It May Be Dangerous

There is nothing funny about a black eye.

Cold applications and time will cure most of them. However, if vision is fuzzy or the eye is cut or painful it is advisable to have a physician examine it to prevent serious, permanent damage, according to Dr. Paul H. Fluck, Lambertville, N. J.

An eye may hardly be discolored, but the minor injury to it can cause serious damage. Dr. Fluck wrote in a recent issue of *Today's Health*, published by the American Medical Association. Sports, especially boxing, can cause serious damage to the eye, even though it is equipped with more safety devices than any other part of the body.

(Continued on Page 42)

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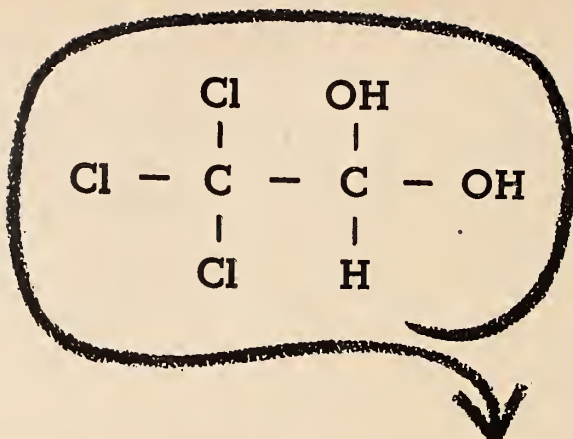
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¹ Hyman, H. T.: An Integrated Practice of Medicine (1950).
² Rehfuss, M. R. et al.: A Course in Practical Therapeutics (1948).
³ Goodman, L., and Gilman, A.: The Pharmacological Basis of Therapeutics (1941), 22nd printing, 1951.
⁴ Soliman, I.: A Manual of Pharmacology, 7th ed. (1948), and Useful Drugs, 14th ed. (1947).

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It's Simple to Reduce—Just Watch Your Diet

The best exercise for reducing is a rapid movement of the head from right to left when the mashed potatoes and gravy are passed.

This expression is based on sound reasoning, according to Dr. Frank H. Krusen, Rochester, Minn., chairman of the Council on Physical Medicine and Rehabilitation of the American Medical Association. Proper reduction of the intake of food is the only logical method of reducing weight.

"The person who desires to reduce weight must be reasonably intelligent, strongly motivated to reduce, have sufficient will power to remain on the low-calorie diet, and realize the importance of keeping his weight down," Dr. Krusen stated in a report to the Council on Foods and Nutrition of the American Medical Association. The report appeared in a recent issue of the *Journal of the American Medical Association*.

A carefully prescribed, well-balanced, low-calorie diet is the only way to lose weight, Dr. Krusen said. Once a person has got over the first 10 days of the adjustment to the new eating habit pattern, he can continue on the low-calorie regimen more easily.

"Baths, massage and exercises are only of value in a secondary role to maintain tone and elasticity of tissues which have been deprived of much adipose tissue following the reduction of weight by proper dieting," he added. "Mechanical gadgets and 'spot reducing' appliances and exercises are utterly useless for removal of regional accumulations of fat."

Hot baths only produce a transient loss of weight through the production of profuse perspiration; the body soon regains sufficient water to make up for this transient dehydration, Dr. Krusen pointed out. There also is no scientific proof that massage of any type can be effective as a reducing measure, he added.

The value of nearly all devices for "spot reducing," the treatment of regional accumulation of fat, is absolutely nil, Dr. Krusen stated.

Exercise is of extremely limited value in causing a general reduction of weight, Dr. Krusen said. The amount of vigorous exercise necessary to achieve any appreciable reduction in weight is so great that such a regimen is not only very difficult, but it also may be dangerous, because it throws additional strain on the already overtaxed heart and blood vessel system of the obese person.

Reducing pills, vitamin supplements, slenderizing creams, laxatives, candies to be taken just before eating, one-food diets, "Hollywood diets," seven-day and 14-day diets of bizarre ingredients, and bath powders are among the things that have been widely exploited as weight reducers, according to Dr. Krusen.

But there is no easy way to reduce fat, he stated, adding:

"Many nonmedical 'weight-reducing parlors' or

(Continued on Page 48)

New Hormone Ointment Aids in Treatment Of Skin Disorders

Hydrocortisone (Compound F) acetate ointment has proved of definite value in the treatment of certain skin disorders, it was reported in a recent issue of the *Journal of the American Medical Association*. Hydrocortisone acetate is one of the newer adrenal hormone preparations.

Satisfactory improvement following topical use of the ointment was obtained in 20 of 30 cases of atopic dermatitis, and in 14 of 28 cases of such other skin afflictions as psoriasis, contact dermatitis and eczema, according to Drs. Marion B. Sulzberger and Victor H. Witten, New York, and Dr. C. Conrad Smith, Valley Stream, New York.

Persons with various types of long-standing skin disorders were treated with this new ointment for periods ranging up to eight months. In most cases, the conditions were known to be refractory to many forms of topical therapy.

In those cases where the response was favorable, improvement usually was apparent within 24 to 48 hours, although it sometimes was not obvious for a week, the doctors stated. Improvement was, for the most part, maintained during the entire time the ointment was used. When application of the ointment was discontinued, the therapeutic effects usually wore off within four to five days.

"While in most of the cases atopic dermatitis improved more than 75 per cent, and some few approached almost complete healing, this progress was not always continuous," the doctors added. "In spite of continued and regular applications of the ointment, there were occasional mild flare-ups of the dermatitis, following which improvement was again noted.

"It is of particular importance that in no case was there any clinical evidence whatsoever of adverse systemic effects produced by topical application of the drug. Furthermore, there were no instances of allergic contact sensitization to the hydrocortisone acetate.

"It is fortunate and advantageous that these ointments are esthetically and cosmetically acceptable. They do not stain skin or clothing, generally do not sting or burn when applied, and do not have a disagreeable odor (if any at all). Actually, when well rubbed in, they are hardly visible."

As with any new therapeutic agent, prolonged and careful observations should be made to discover if there are any alterations in bodily physiology or biochemistry as a result of the topical applications, the doctors stressed. In addition, further studies should be made to elucidate the precise mechanisms by which the local therapeutic effects are achieved, they added.

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Black Eye Not Funny; It May Be Dangerous

(Continued from Page 33)

"Although most black eyes are not serious, a tap on the eye—even a light tap—can be transmitted through the fluid contents with sufficient force to damage the retina," Dr. Fluck pointed out.

"A tear or a separation of the retina means blindness forever in that part of the eye unless natural healing or surgery can make the separated portion of retina readhere to the tissue below.

"The operation that eye surgeons have devised to repair retinal injuries is one of the foremost miracles of modern surgery. Tiny needles are inserted

through the outer coats of the eyeball in the vicinity of the torn retina. An electric current—just sufficient to supply the right temperature—is applied to each needle. This heat induces scar tissue to form, and if the operation is a success the scar tissue will reunite the damaged retina with the underlying tissue. Often a number of operations are necessary before vision is restored."

Dr. Fluck stated that first aid to most black eyes consists merely of the application of cold compresses—wet wads of cotton dipped into cold water—for 15 minutes every hour or so the first day. This treatment may prevent deep discoloration.

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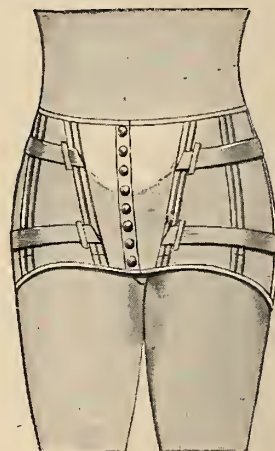
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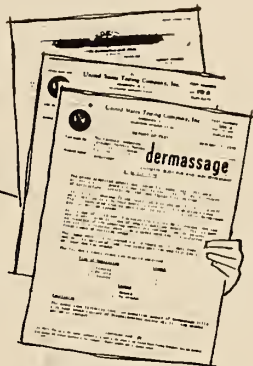
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It's Simple to Reduce—Just Watch Your Diet

(Continued from Page 38)

'slenderizing salons' exploit various combinations of baths, massage and exercise. Usually such plans for reduction of weight depend basically on a special low-calorie diet which is introduced somewhat surreptitiously in conjunction with the highly touted physical procedures.

"While psychiatric problems often contribute to the desire to overeat, I am convinced that many adults whose work forces them to lead sedentary lives and who in their youth were athletic and developed the habit of heavy eating, gain weight simply because when they were more active physically, they learned to like large quantities of food. They overeat simply because they thoroughly enjoy fine food."

Armed Forces Discount Reports On Hepatitis Rate

Following press reports of high incidence of homologous serum jaundice (hepatitis) among U. S. troops getting plasma, the Armed Forces Medical Policy Council and Army Surgeon General's office decided the record should be set straight. These points were made: (a) Studies show that 23 per cent of the severely wounded receiving 5 to 10 units of plasma contract hepatitis from 60 to 180 days after the infusions, but mortality rate is only one in 1,000 cases; (b) while serum albumin has been found free of hepatitis virus, there isn't enough supply to replace plasma; (c) a National Research Council committee is working on sterilization of plasma but until it arrives at a solution, plasma will continue to be used by the services. Officials said they were anxious that the public not stop donating blood because of the misinformation on plasma. — *From A.M.A. Washington Letter.*

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• Number 3

Subtotal Gastric Resection for Peptic Ulcer

Preliminary Report of a Variation in Technique

GUNTHER W. NAGEL, M.D., San Francisco

INTERNISTS AS WELL as surgeons agree that subtotal gastric resection is a satisfactory therapeutic measure for a selected group of patients with intractable or complicated peptic ulcer. That it is not accepted as a final solution to the problem is obvious and surgeons are constantly striving to improve the operation technically and physiologically until such time as other and better methods of treatment will have eliminated the need for surgical treatment.

So much has been written on gastric resection since publication of a report on Billroth's² first successful operation in 1881 that it would now be impossible for a practicing surgeon to review personally all the papers on this subject. However, even occasional partial review should help toward fuller understanding of the development of and the reasons for present procedures, and thereby provide a basis for correct evaluation of new procedures as they appear.

Resection of from three-fourths to five-sixths of the distal portion of the stomach for peptic ulcer has come into general use because removal of a lesser amount of stomach, as was done formerly, was followed in a high proportion of cases by recurrent gastrojejunal ulceration. The early method of resection of the pyloric antrum alone was based on Edkins'¹³ observation that this portion of the stomach when stimulated secretes a hormone, gastrin, which activates the secretion of hydrochloric acid.

From the Department of Surgery, Stanford University School of Medicine, San Francisco.

• Internists as well as surgeons agree that subtotal gastric resection is a satisfactory method of treatment for a selected group of patients with intractable or complicated peptic ulcer.

A short historical review of the development of the operation is given.

The importance of removing a large portion of the acid pepsin-secreting area of the stomach is stressed. A variation from the usual method of resection accomplishes this and at the same time leaves a satisfactory gastric pouch and lessens the incidence of the dumping syndrome.

It soon became evident from the clinical experience of many surgeons, however, that removal of the antrum alone was not enough and that in addition removal of a part of the body of the stomach with its acid-secreting cells was necessary if permanent cure was to be attained and secondary jejunal ulceration be prevented.

The more extensive resection entailed greater incidence of disagreeable sequelae, particularly the dumping syndrome. While the exact cause and nature of this syndrome is not understood, it seems reasonable to assume that physiological and mechanical factors resulting from the loss of so large a portion of stomach play a role.

Connell³⁻¹⁰ introduced in 1929 a new concept in the principle of the surgical treatment of ulcer.

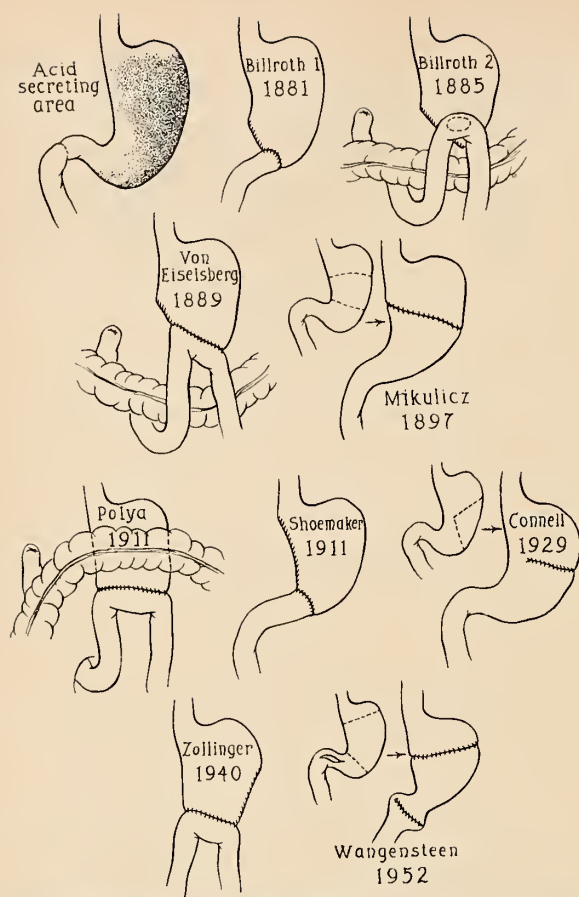


Figure 1.—Location of acid-secreting cells in stomach and methods of subtotal gastric resection.

Accepting the importance of the acid pepsin factor in the production of ulcer, he recommended removing a large portion of the acid-secreting area and at the same time retaining the alkaline-secreting antrum and the pyloric sphincter. He did this by making a wedge-shaped excision of the body of the stomach with the apex of the wedge close to the lesser curvature but not dividing it. He recognized that this could not be done as an isolated procedure in the presence of obstruction, but advocated and himself performed plastic procedures at the pylorus where this was indicated. Before performing the operation on selected patients he satisfied himself of its feasibility by carefully controlled experiments upon animals. The series of clinical cases which he reported, while not large, indicated good results following the operation. In experiments by Connell and by other investigators it was observed that the acid values in fundusectomized dogs, after an initial decrease, soon returned to preoperative levels. Mann¹⁶ pointed out that an estimate of the volume of secretion rather than of acid value alone might be a better method of determining the possible value of the procedure. Connell's method of fundusectomy has not been

taken up by other surgeons, largely because the experimental work does not seem to justify it and because of the good results obtained by adequate and properly performed subtotal gastric resection by more orthodox methods. That his conclusions have not been widely accepted is not sufficient reason for ignoring them, and it may well be that his deductions should be made the object of further experimental work and studies to see if they may not at least in part be incorporated into the present-day concept of the surgical treatment of peptic ulcer.

More recently Wangensteen^{24, 25, 26} has adopted Connell's concept of the desirability of removing the acid-secreting area of the stomach and leaving the gastrin-secreting area. He accomplishes this by extending the old segmental resection of Mikulicz¹⁷ which removed a relatively small section of the body of the stomach. Wangensteen removes almost all the body of the stomach, leaving the pyloric antrum and a small portion of the fundus, which are then united in continuity. To overcome the effects of the resulting interference in motility he widens the pylorus by means of an extensive Heineke-Mikulicz procedure. Wangensteen reported good results.

Like Connell's, Wangensteen's operation has not been accepted by the surgical profession and for basically the same reason, namely, that a surgical procedure like the orthodox subtotal gastric resection, while admittedly not perfect, has stood the test of time and will not be superseded until another procedure has been proven superior by the same demanding tests.

In 1940 Zollinger²⁷ combined so-called fundusectomy with pyloro-antral resection. He did this by removing the body of the stomach and the greater curvature well up to the fundus and reestablishing continuity by anastomosing the jejunum to the remaining gastric pouch adjacent to the lesser curvature. The operation was almost total resection and was used only in a limited number of complicated cases.

Many methods of reestablishing gastrointestinal continuity after partial gastric resection have been described. Basically they are all modifications of either of the two methods originally described by Billroth, namely:

- I. Direct anastomosis between the proximal and distal segments.
- II. Closure of the distal segment and anastomosis of the proximal segment to the intestine somewhere below the closed end.

There is no need to review again the many types of operations described to accomplish this union. Accepting the present view of the importance of the acid pepsin factor in the cause of ulcer it can be said that success of an operation depends more on

removal of a sufficient amount of stomach, including a portion of the body together with the pylorus, than it does on the particular method in which this is accomplished. The author considers a short loop desirable and therefore makes the anastomosis beneath the transverse colon, suturing the edges of the opening in the mesocolon to the stomach wall above the line of anastomosis. Occasionally if anatomical conditions favor it, a Billroth I operation is done. No exact way to measure or to designate how much of the stomach is removed has been established. Fractional terms such as "three-quarter resection" and "seven-eighths resection" are used by surgeons, but it is probable they are inaccurate and often indicate resection of a larger area than was actually removed. It cannot be seriously questioned that the larger the portion of the stomach removed, the greater are the technical difficulties for the surgeon and the greater the risk and discomfort for the patient.

MODIFIED TECHNIQUE

These considerations have led the author to a modification of the usual technique of gastric resection which meets the requirement of removal of an adequate portion of the acid-secreting area of the stomach yet retains a little more of the lesser curvature or magenstrasse which is important for the motor function of the stomach. It is essentially Zollinger's operation done in a somewhat less radical manner.

The operations commonly used today are the Polya¹⁹ and Von Eiselsberg²² and Schoemaker²⁰ modifications of the Billroth II procedure. In the Polya operation the whole circumference of the stomach is anastomosed to the side of the jejunum, whereas in the Von Eiselsberg and Schoemaker modifications only that portion of the resected stomach which meets the greater curvature is used for the anastomosis. The resection is made to include most of the lesser curvature and a large part of the greater curvature and fundus remain undisturbed.

Cox¹¹ and other investigators^{1, 12, 18} showed that the acid-secreting cells of the stomach are concentrated in the body of the organ and along the greater curvature well into the pyloric zones and that they are less in number in the fundus and along the lesser curvature. This being so, it would seem desirable to resect a larger portion of the stomach along its greater curvature with its acid-secreting cells and to retain more of the lesser curvature. The operation used by the author accomplishes this. Because of the large mucosal folds in the body of the stomach and along the greater curvature, this procedure will remove considerably more acid-secreting area than a measurement of the corresponding serosal surface would indicate. The lesser curvature is freed to about

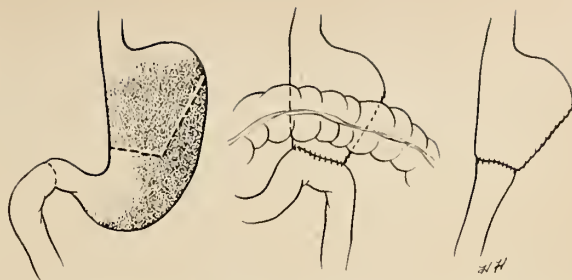


Figure 2.—Illustrating operation in which excision of a large part of the greater curvature removes relatively more acid-secreting cells yet retains relatively large gastric remnant.

the junction of its upper and middle thirds and a clamp is placed at right angles to it to include a sufficient amount of the stomach for satisfactory anastomosis. A second clamp is then applied at an angle along the greater curvature so as to remove the desired amount of this part of the stomach. The portion of stomach included in this clamp is then closed and the anastomosis made to the stomach adjacent to the lesser curvature either as a Billroth I or Billroth II procedure. The author has done the operation in enough cases to know that the stomach pouch functions well after operation. Further studies, now in progress, may help toward better evaluation of the procedure.

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A.M.A. Revises the "Essentials of an Approved Internship"

AN ADVISORY COMMITTEE ON INTERNSHIP, appointed by the Council on Medical Education and Hospitals in the fall of 1951, conducted a study in the past year reviewing the internship in its broadest aspects. As a result of its study the Advisory Committee recommended revisions in the "Essentials of an Approved Internship" which were ratified by the A.M.A.'s House of Delegates in December.

Among the changes in the requirements for hospitals offering intern programs were the following: Approval by the Joint Commission on Accreditation of Hospitals; bed capacity increased to 150, excluding bassinets; annual admissions increased to 5,000, exclusive of the newborn, and the autopsy rate increased to 25 per cent.

Under these revisions the Council will approve rotating and mixed internships and straight internships in these specialties—internal medicine, pediatrics and surgery. Straight internships in pathology and obstetrics-gynecology will no longer be approved.

The revised "Essentials" became effective January 1 for new approvals. The autopsy rate of 25 per cent became effective for all hospitals January 1.

—A.M.A. News Notes

Preventable Diseases: The Scope of Public Health

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IT HAS SLOWLY PENETRATED the minds of the devotees, the disciples, and the crusaders for public health that science and democracy are a team that cannot be managed from the bleachers. Whether we are physicians, engineers, nurses or any of the half dozen other associated professionals concerned with public health work, we have to get into the game ourselves and play ball, whether in the sand lot or on the turf of a levelled diamond.

We are deeply concerned with a true and enduring marriage between medical science, or human biology, and society, that is, our own local community and its elected and appointed officers of government.

Without reviewing the experience of the past century, we can, I think, agree that there is a close similarity in the duties and organizations of local health departments across our continent.

Granted that the scope of public health is as broad as human biology, with its subtopics of sociology, eugenics and ecology, there is still place in our thinking for priority, for emphasis, for timeliness and for exercise of discrimination in the conduct of our public service.

The sick we shall always have with us, and we can be assured that leadership and responsibility for the care of them will be the major undertaking of the medical profession in the foreseeable future. We, the minority group concerned with the health of the public rather than with the care of its sickness, can claim a certain distinction in that we seek goals unthought of by the great mass of patients and physicians who live in the hope of a miracle drug or the flashing knife that searches ever deeper into the very brain and heart of man.

What is in fact our chief preoccupation, that glint in the eye, that lift of the chin that marks us as fanatics by choice? We have, I think, forsaken the ancient gods, the temples of Aesculapius, for new sanctuaries where we worship the cult of prevention. We can imagine ourselves a sort of priesthood that can ward off all kinds of sickness and ill health. Our belief, our hope, our career is in prevention.

There is, of course, no calculable end to the list of preventable diseases. It is added to almost daily, and with the increasing length of the list we see the

• The purpose of a department of public health is to put into effect for the benefit of all the people of a community the practical lessons of preventive medicine. The scope of public health work is chiefly determined by our knowledge of the causes of the preventable diseases. We do not know how to prevent all diseases. We do, however, know effective ways to prevent or to reduce the occurrence of at least a dozen varieties of disease.

Every health department ought to provide for a program and services which will prevent so far as possible the preventable diseases and the preventable hazards to health. To concentrate on prevention is to avoid diversion by specious arguments into the fields of medical care of the sick.

weight of fear and anxiety, ignorance and superstition, uncertainty and despair fall from the shoulders of fellow beings, from the centenarian to the babe unborn.

The earliest and still, to my mind, the prime object of the sciences of preventive medicine is the sparing of man and his society the suffering, injury and shortened lives due to preventable diseases.

I solicit your criticism, your objection to my tentative categories, your outspoken suggestion of omissions, as well as of my errors of commission. I offer you as a working basis, more or less in the order of social or numerical importance, a listing of what I believe to be the preventable diseases. Until we have done our utmost to prevent what we know to be preventable, I see little excuse for our engaging the army that parades under the flag of public health in the care of the sick. Second to our obligation to make effective use of what we believe we know about preventing disease is a duty to use the formidable resources of demography, epidemiology, biostatistics, biochemistry, genetics and the whole range of experimental techniques to discover clues to preventability of diseases still thought of as unavoidable, and then apply our new knowledge in the field to practical purposes, to social ends.

First in biological and numerical importance are diseases of nutrition. While gluttony, the cause of most obesity in the United States, marks some 25 to

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30 per cent of us as suffering from surfeit, more than half the world's people face each day the probability of insufficient food to permit growth, development, repair resistance to infection. We can be as precise and definite in describing the deficits of diets, the results of general and specific shortages or lack of nutrient and accessory food factors as we have been in epitomizing our knowledge of the communicable diseases.

While there are broad gaps in our information it must be said that we do now know enough to prevent a long list of preventable disorders of nutrition or metabolism. Not by authority of law in most instances but by the persuasive power of education and the resourcefulness of agriculture, transport, chemistry and economics, we can do more than we have yet imagined. There is a limit to the diseases of nutrition.

Second in importance, it seems to me, are the occupational diseases, all of which are preventable.

Of these there is no end. There is no occupation but compulsory military service that must be tolerated in the public interest if the employment hazards the worker's health. War may be considered a form of preventable mental disease.

This whole field awaits the health officer, for surely no one else is more than picking at it. Not labor, not management, not the surgeon, toxicologist or engineer alone, but all together are needed for prevention. I see it as a public duty for the health officer to know the places and conditions of work of all occupied people in his community, at least those self-supporting persons working outside the home. For lack of morbidity reporting, and of records of absenteeism from work and its causes, we live as it were with statistical blinders on our minds, waiting some dramatic episode to reveal a new kind of glue, plastic, dust, fume or fatigue to bring a workman to death's door.

Environmental sanitation of the future will be less concerned with smells and smoke, with pigpens and winery wastes than with the places and conditions where men and women work, and the results of these upon their lives as well as upon their livelihoods. We shall see on the walls of health department offices pin maps designating occupational hazards, reported cases of inadequate space, light, cleanliness of air and other factors leading to illness or disability. We shall be as determined to stop epidemics of lead poisoning as to control smallpox. When men and women leave their homes to work indoors or out, they will be conscious of the concern of the local health department with their shop, office, ship or plant.

Third in current importance in our own country

is the category of communicable diseases, the conquest of which has been the main purpose of health organizations around the world. Our work is popularly measured by our successes and failures in this field. We can more nearly honestly speak of control of these than of any other kind of preventable disease. Perhaps the greatest triumphs of the future will be the hoped-for mastery of the common cold, the dysenteries, gonorrhea and neutropic diseases of virus origin. In no other field of preventable diseases does the performance of public health services come so near to applying effectively the sciences which have put in our hands the resources of diagnosis, immunization and specific or selective therapy. We can comprehend if not finally list and classify the communicable diseases in their entirety. Doubtless new and unexpected infectious vectors, mutants of existing or developing microorganisms and their transmitters in the insect and animal kingdoms, will arise to plague us anew, but our resources are many and we can await such biological novelties with confidence in our past experience.

The fourth group, and perhaps the most important in terms of international as well as personal health, is preventable conditions of the spirit of man. Disturbances and defects of mentality, personality, emotions, behavior or interpersonal relationships now begin to receive the attention they warrant as we shift emphasis from concern chiefly with institutional care of the already mentally sick or socially inadequate to guidance by sympathetic education in the natural history of mental health. No more difficult task has faced the health officer than the obligation to interpret to his community, the families, school teachers and children, ministers, publicists, legislators and public servants, the principles of character development, emotional growth and the basic types of human conduct that, if ignored, may lead to such despair and frustration of life as no other of the ills of man approach. We fumble with the facts, struggle with the structure of administrative application of the truths already manifest to us and grope for methods of approach to the motives of man upon which his often disordered conduct depends.

No more difficult problem faces the sciences of preventive medicine and yet none discloses and demands more varied forms of cooperative and inter-professional concern. If health is to be the happiness we believe it can be, and not merely a dull normality of bodily functions, an absence of physical pain or fever, the mind and spirit of man must be released from the handicaps that have developed under the restraints, the traditions, the urges to dominate, the social complexities of our day.

Fifth in order is one of the closely related phases of the last described, namely, the effects on body and mind of the habit-forming drugs, primarily the derivatives of opium, coca, cannabis and, the most prevalent and destructive of all, ethyl alcohol. Some would add tobacco, peyote and marihuana. It seems to me that of all the glaring, insidious, persistent and deteriorating practices of man, the voluntary drugging of his brain and central nervous system by alcohol is hardly second to any other wholly preventable condition. Well informed leaders in public health at national, state, and local levels have given well documented evidence that in terms of sickness and death, economic loss and cost to the person, the family and the community, the drinking of alcoholic beverages is numerically among the first four, at least, of the enemies of good health in the United States, with our national capital recording a higher per capita alcohol consumption than any of the states. And yet hardly a beginning has been made in any state or city to do more than provide humane care, medical skills, and a gesture of rehabilitation for persons with advanced cases of chronic alcoholism. There is no clearer challenge to the cohorts of public health than to apply themselves to education, by example as well as by precept, for the prevention of alcoholism.

The sixth category of preventable conditions is one of the tempting and intriguing, the most constructive and welcome of the established fields of public health effort—the prevention of conditions which may lead to disturbances of growth and development in maternity, infancy and childhood. Is there any other aspect of existence, or of the processes of biological continuity and evolution more precious or significant than that of human reproduction, the succession of the generations, the replacement of parents by their children, the inheritance of characteristics, the infinite variations in the genetic pattern of individuals? We are deeply concerned with each stage in the processes of choosing a mate, of being fit for marriage, for procreating, for pregnancy, and childbearing and rearing, and for the safety of the developing embryo, the neonatal period of infancy and the growth to and through school age, adolescence, employment, and around the circle until a new family is in process.

And we begin to learn latterly that we have created a problem of longevity by the very fact of saving the lives of little children and youth to grow up and grow old.

To survive until reproduction has been achieved is the minimal objective of human existence. To live the full span of life in health is a further social goal and we now find it desirable to guard the develop-

ment of age as we did that of youth. I think of this field of public health effort as that of preventable conditions of development in the stages of reproduction, growth, maturity and old age. We cannot escape official concern with both fertility and sterility.

This leads to a seventh category, the preventable conditions of inheritance. We begin bit by bit to understand the skin of the chromosomes, to relate inherited peculiarities of body form and structure to particular genes. We separate better the preventable causes of congenital defects from the still unknown hereditary factors we see to be uncontrollable. True it is that our information is scanty and our social resources to prevent serious hereditary defects slender and rarely applied, but a glance through the rapidly growing library of books on inheritable defects opens a wide door of future possibilities.

Nevertheless, there have been remarkable results from systematic social and medical efforts to eradicate some hereditary blights such as Huntington's chorea, now non-existent in Minnesota.

An eighth group of disabilities, largely of inheritable origin but subject to many resources of prevention, is the protein susceptibilities, the allergies—*strange maladies*, as they have been called. Environmental protection, guided and selective personal hygiene measures, avoidance of occupational excitants, and a portion of wise medical management of personality reactions to the stresses of life—these and other resources can be helpful not only to the individual but, through mass measures and education, to whole communities such as live under the seasonal cloud of ragweed and other prevalent irritating pollens.

We now come to the last four of my groups of preventable diseases, each of which has been busily promoted by widespread social concern, research developments and some promising measures of public health administration. I refer to malignant tumors, diseases of the heart and blood vessels, dental caries, and accidents.

As to malignant tumors, we have confused the public by using the word *control* when this can be applied only to those of occupational origin, and so properly within the field of public health. Some cancer is preventable, but early diagnosis and appropriate treatment while postponing or even preventing death is not the prevention of cancer. Education of the public by the health department and the medical profession in the wisdom of early and repeated medical examinations and wide publicity as to the value of prompt treatment and how and where and by whom it can be had—these are valued promotional efforts. However, evidence of substantial results from

efforts to prevent cancer is slight, although surgical treatment and radiation have saved many persons from premature death. We await hopefully for some suggestion of preventable factors of causation, other than in certain occupations, before we can plan in entire honesty for prevention.

As for diseases of the heart, our tenth group of preventable diseases, with the exception of those due to nutritional disorders (beri beri, endemic goitre, obesity), and to communicable disease (syphilis) already included under groups 1 and 3, we have the sequelae of rheumatic fever and senescent or arteriosclerotic heart disease. It remains to be seen whether any measures intended to prevent rheumatic carditis or to delay or postpone the vascular changes of senescence actually produce any statistically significant results. At least at present the most promising factors for the prevention of the great mass of heart disease are the care of a competent physician, the avoidance of streptococcus infections and the maintenance of moderation in physical and emotional aspects of personal hygiene. The publicity and popular promotion of interest in heart disease as the most frequent of the causes of death may well be justified for fund-raising purposes and to encourage people to have periodic health examinations at suitable intervals, but evidence of a reliable kind is lacking to support claims that the prevention of heart disease has made any appreciable progress unless it be in rheumatic carditis and deaths from this condition in persons under 30 years of age.

Dental caries is the eleventh category of preventable disease and there might be added other defects of dental development. Despite the fact that we do not know the main or underlying cause or causes of dental caries as it prevails among preschool and school age children, there are at least three measures that have brought about very substantial (about 45 per

cent) reduction in this condition: Oral hygiene supplemented by prophylactic cleansing of teeth by dentists; diets such as the Oslo diet and the supplementation of a balanced diet for children by vitamin dosage, and combined with omission of or great reduction of refined sugar use in foods and soft drinks; and the use of fluorides either by topical application to the teeth or by fluoridation of drinking water supplies. Perfect methods and results have not been attained but great benefits have followed each of the policies above named and we can look forward to still better records of sound teeth when simultaneous use of all three is undertaken.

As for accidents, the last of our list of twelve, we must admit that so far public efforts have had meager results, best under conditions of industrial employment, but only in exceptional circumstances on the highway and in homes. Techniques are being developed and one can take courage from the experience of Dr. Prothro at Kalamazoo, Mich., that a community can be made sensitive to the danger of home accidents and will respond helpfully to health department leadership with efforts to reduce these.

To what end have I dragged you systematically through this dozen of headings? Because in the first place there seems to me to be a tendency to divert the resources of public health departments to purposes for which they were not intended and that otherwise qualified agencies can fulfill as well or better. Because no other body of professional servants of science and the public is so well qualified to deal with preventability of disease and make it work for the public good. Because it seems to me if officers and health department staffs would concentrate on prevention they will be so well occupied and so satisfy their public that their energies will not be diverted by specious arguments into the fields of medical care of the sick.

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Diabetes Mellitus and Diabetic Retinitis

Factors Influencing Regulation

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NOW THAT INSULIN has been in general use for more than thirty years in the treatment of diabetes, it seems worth while to review the results of treatment and particularly the results of various types of treatment. First it might be well to define diabetes and to consider the nature of the disease. Like most textbooks, the most recent and most universally used textbook on medicine describes diabetes mellitus as "a disorder of carbohydrate metabolism characterized by hyperglycemia and glycosuria." But if only the carbohydrate metabolism were involved, treatment would be reduced to a simple equation and there would need be no further concern regarding the safety of the patient or his future. That such is not the case is reason for review of some of the other, and equally important, factors which regulate the disease.

The Naunyn era extended from 1898 to 1914. Carbohydrate intake was restricted ad infinitum, while fat and protein were forced to the limit of digestibility. To combat the effect of carbohydrate restriction, overfeeding was insisted upon, a measure which, confoundingly, brought about rapid weight loss and emaciation. Gangrene, severe retinal hemorrhages and cataracts were exceedingly common. A great deal of an attending physician's time was occupied in forestalling acidosis and combating impending coma. Coma was the universal cause of death. The average duration of life of a diabetic child was only three to six months.

In the Allen era, 1914 to 1921, the treatment of diabetes was brought from a state of empiricism to one of some scientific accuracy. In this brief era the life span of diabetic persons was more than doubled. Diabetes was shown to be a disease of total metabolism and not one solely related to carbohydrate. Too close restriction of carbohydrate was shown to be harmful. The principle upon which this newer form of treatment rested was a restriction of the total calories to the amount which the patient was capable of utilizing.

Today, no physician would recommend undernutrition in any sense of the word, but all should be

• *Fifty patients with diabetes of long duration—20 to 35 years—who followed regimens to control the disease with the greatest fidelity did not have visual complaints; retinal abnormalities were minimal and hypertension, albuminuria and renal impairment were absent.*

Diabetes is a disease of total metabolism and not related solely to carbohydrate. In the pre-insulin era many facts concerned in the regulation of diabetes were established scientifically—facts such as that regulation of the body mass and control of obesity are important, that damage is caused by over-restriction of carbohydrate intake, and that hyperglycemia activates diabetes. Many failures in the treatment today are owing to insufficient attention to these basic factors. Good control requires an effort to keep hyperglycemia and glycosuria at a minimum.

guided by scientific information gained in that period. At least it was learned that overnutrition and careless diets were unwarranted. This was a difficult era. Many disconcerting stigmata were attached to it, not only because of the low calory diets, emaciation, weakness and death, but because any form of treatment was unsatisfactory. The number of physicians who practiced during that era and saw the distressing ravages of the disease is rapidly decreasing. Today the disease is masked with insulin.

Through clinical and animal experimentation certain basic facts were established. Diabetes became quiescent with reduction of the body mass and metabolism. High calory diets activated diabetes rapidly. The more liberal the diet, the more rapid the loss of weight. Following the onset of diabetes with polyuria, polydipsia and weight loss, patients were never able to retrieve any of the weight thus lost. Hyperglycemia was shown to be harmful. Well controlled diabetes became rapidly activated in the presence of hyperglycemia. The experimental production of hydrophic degeneration of the beta cells of the pancreas in the presence of hyperglycemia and the reversion to normal cells when hyperglycemia was abolished bears considerable scientific weight. One

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thing which made a firm impression in that era was the rapidity with which diabetes progressed when the metabolic load was increased by tuberculosis, infection, hyperthyroidism, obesity, acidosis or pregnancy. Diabetic women rarely became pregnant and when they did early termination was necessary to save the mother's life. The rapidity with which wounds and infectious diseases healed in animals and humans following the restoration of normoglycemia with low calory regimens was an amazing and revealing phenomenon. This was related to the restoration of normal water balance and the alleviation of chronic dehydration which accompanies hyperglycemia. Later, Bird and MacKay⁶ in 1932 showed that dehydration exerted a profound influence on wound healing.

Thus, in this era, a definition was established—that diabetes is a condition in which the patient is unable to utilize the normal amount of food. Food is measured in calories. Sugar and carbohydrate are not specific factors in diabetes. The only relation which carbohydrate bears to diabetes is the law of diminishing return—the greater the concentration of the carbohydrate, the less it is utilized.

INSULIN

Within a brief period of years following the discovery of insulin, it was recognized that it was not a panacea. Its principal value was that it kept patients alive. In order to control the disease successfully it is necessary to make use of facts regarding regulation which were learned in the preceding era.

One of the first of the clinical experiments was the high fat diet of Newbergh and Marsh,¹⁹ who recommended daily intake of 200 to 300 grams of fat and restriction of carbohydrate. With this diet glycosuria could be abolished for a short time, but diabetes soon became severe and uncontrollable—a fact which had been previously demonstrated in the Van Norden and Allen eras. Then came a period of high carbohydrate diets.²⁷ The diets were low in fat. Any success which this form of treatment possessed lay in the previously known fact that carbohydrate can be increased appreciably when the total caloric intake is restricted by the limitation of fat. Other forms of diet have been advocated: high protein, alcohol, inulin, odd carbon fat, and many others.

After insulin became generally distributed in 1922, physicians treating diabetic patients were soon confronted with the difficult and obstinate problem of obesity. It was soon realized that insulin was not the sole answer in diabetes and that obesity complicated management. In the author's experience

those diabetic patients who have avoided obesity have shown consistently the best results. There is some relation between the insulin requirement of the body tissues and the caloric equivalent of the tissues; that is, the body fat has an insulin requirement much greater than the body protein structures. The successful treatment of diabetes is not a matter of keeping a patient aglycosuric with liberal diets and large amounts of insulin. It is possible to keep patients aglycosuric with huge quantities of insulin and high calory diets, but vascular complications occur early when that is done. Successful treatment is a matter of avoiding overnutrition and not subjecting the patient to a metabolic load over and above that required for normal nutrition.

CONSTANT NORMOGLYCEMIA

Normoglycemia, although it is not possible to maintain it throughout each 24-hour period, should be the object of treatment and control. The best results have been obtained in those patients who have most consistently avoided glycosuria and hyperglycemia. As hyperglycemia and glycosuria are non-physiologic to say the least, it is logical to believe that patients who avoid these abnormalities for the greatest portion of each 24 hours will be freest from active diabetes. In diabetes it is not possible to maintain constant normal metabolite balance, but this is no reason to be discouraged from attempting it. Tissues which are constantly bathed in solutions of molecular concentration greater than normal may not be expected to remain normally viable over any extended period.

Caloric restriction should be such as to provide a diet adequate in calories for daily activity, but with no surplus. Protein in the diet deserves the first consideration; it should be normal for the individual. The amount of carbohydrate needed usually is from 150 to 200 grams. Caloric restriction is accomplished principally by limiting the amount of fat in accord with the nutrition, weight, duration of diabetes and state of diabetic control.

CONTROL OF HYPERGLYCEMIA

The progress of 50 diabetic patients controlled from the standpoint of hyperglycemia and glycosuria and followed 25 or more years by Reuting²¹ is very heartening. Reuting's report was a follow-up of one made by Shepardson²⁹ in 1929 upon patients who at that time had had diabetes for five years or more and were less than 40 years of age. There was no instance of blindness in the group reported upon by Reuting even though the average duration of diabetes was 28.4 years.

In the excellent work of Jackson and associates¹¹

it was observed that degenerative lesions were less prevalent in children in whom hyperglycemia and glycosuria were continuously controlled. Ricketts²² expressed the belief that until hyperglycemia is scientifically proved to be harmless, it is unsafe and unwise not to strive for normoglycemia. White³⁵ in a report on a large series of juvenile patients called attention to the importance of dietary control in preventing vascular lesions. Mosenthal¹⁸ emphasized conservation of body protein, which is destroyed in the presence of glycosuria; and he also stressed the effect of chronic dehydration associated with glycosuria as a factor in tissue injury. Jackson¹² observed that juvenile patients with well controlled diabetes tolerated exercise with less risk of reaction than did patients in whom the disease was poorly regulated. White,³⁶ reporting upon a study of 220 diabetic juvenile patients with diabetes of over 20 years' duration, noted that the incidence of vascular lesions depended upon the degree of control. Joslin's¹³ vast statistics are convincing as to the value of treatment in reducing the incidence of vascular complications. He called attention to the work of Dolger⁷ and others, and stated: "We are greatly indebted to them for bringing home to us so forcibly that many patients with diabetes of 25 years' duration show trouble with their eyes and their vascular systems. These more recent graduates have had opportunity to study your and my poorly treated cases, but ten years from now they can report success with our better methods of management." Root²⁶ reported upon patients in whom diabetic neuropathic changes were owing to lack of control by diet and insulin rather than to the severity of diabetes. Root and Sharkey²⁵ noted extraordinarily early incidence of vascular disease in obese patients. Early appearance of vascular disease was associated with lack of control in Wilson's³⁷ series of several hundred patients with diabetes of long-standing. Patients who had had diabetic coma once or more after diagnosis had more vascular lesions than those in whom the disease was well controlled.

Kimmelsteil-Wilson syndrome has not been noted in patients in whom hyperglycemia is consistently controlled.

THE RETINAL CHANGES IN DIABETES

Formerly retinal changes in diabetes were considered to be of arteriosclerotic origin,³³ but it is now known that that is not the case.³² With the prolongation of life with insulin, the classical retinal picture in diabetes can be recognized in young persons who have neither arteriosclerosis nor hypertension.

As early as 1875, Leber¹⁵ published observations on pathologic changes in the retina in diabetes. He

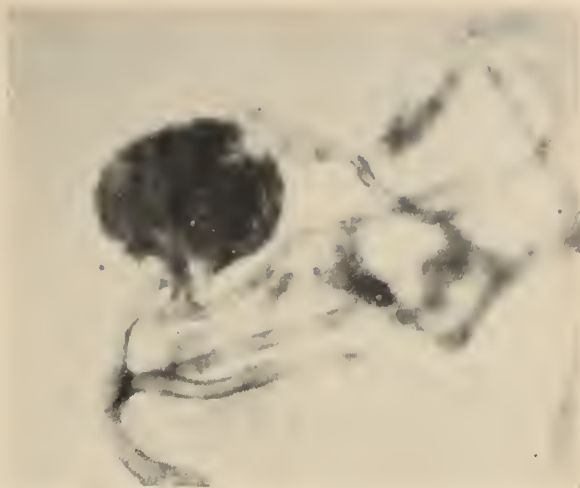


Figure 1.—"Microaneurysms in unstained retina, viewed on the flat. They are attached to capillaries" (A. J. Ballantyne and A. Lowenstein, *Brit. J. Ophthalm.*, p. 594, Dec. 1944.) Also see reference 16.

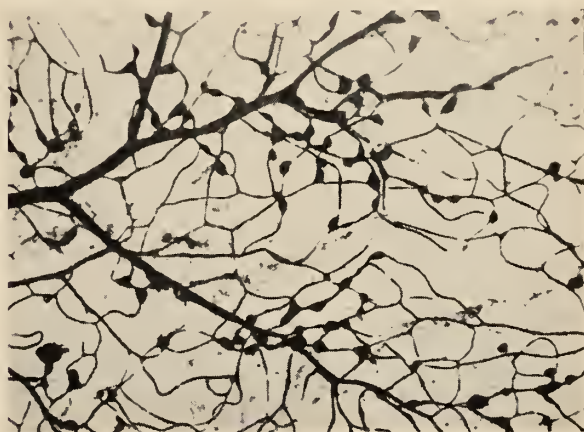


Figure 2.—Capillary microaneurysms can be found ophthalmologically in untreated diabetes as early as the twelfth to fifteenth year. They occur at a much later date in thoroughly controlled diabetes and, although visible, they need not necessarily interfere with vision (Ashton, N.: *Retinal microaneurysms in the nondiabetic subject*, *Brit. Jr. Ophthalm.*, 35:189, 1951).

described the round punctate spots in the perimacular area which now are well known. Undoubtedly the earliest pathological changes in diabetes occur in the retina. In 1876, MacKenzie¹⁶ also described the ophthalmoscopically observable changes of diabetes much as they are known today. His illustrations of microaneurysms which he observed in fresh tissue are identical with those of later observers.¹ In 1943, Ballantyne³ called attention to capillary telangiectases or aneurysms which he thought might be specific in diabetes (Figure 1). Further work by him,⁵ and investigations by Friedenwald,⁹ Ashton¹ and others indicated that there is rather high incidence of such lesions in uncontrolled diabetes. In a recent report by Ashton² it was noted that

TABLE 1.—Persons in whom diabetes developed before the age of 17 and who have had diabetes from 20 to 30 years without visual disturbances or visual complaints. All came under supervision early and at no time were subjected to a high calory dietary. The calories in the diet have been adequate for their normal work and environment. Albuminuria, renal disease and hypertension are consistently absent. Minor retinal changes are present, but vision has been preserved in spite of the added burden of pregnancy in many. There were ten successful pregnancies in seven of these patients.

Sex	Age at Onset	Present Age	Duration, Years	Blood Pressure	—Weight— (Pounds)		Height	—Insulin—		—Present Diet—				Retinal Changes †	Condition of Eyes	Children
					Maximum	Present		Protamine Zinc	Regular	Protein (Gm.)	Fat (Gm.)	Carbohydrate (Gm.)	Calories			
F	2	31	29	130/70	126	113	5'4"	18	8	....	....	....	1700	I	Vision 20/20.	....
F	14	44	30	140/90	117	110	5'1"	24	20	....	....	....	1600	O	Vision 20/20.*	3
F	2	32	30	135/82	115	109	5'3"	30	10	71	74	185	1685	I	One small scar.	....
F	2	32	30	140/85	130	126	5'4"	44	20	85	70	170	1650	I	One small hemorrhage.*	....
M	15	44	29	135/80	225	200	6'0"	50	30	....	....	....	1705	I	20/20 vision.*	....
F	10	34	24	124/84	138	125	5'5"	26	20	90	90	150	1770	II	Punctate hemorrhages, aneurysms.*	1
F	8	33	25	120/81	137	126	5'2"	35	25	....	....	....	1500	I	Vision 20/20.	1
F	8	30	22	120/72	116	97	5'2"	18	9	72	72	140	1596	I	Few aneurysms. Vision 20/20.*	1
F	14	38	24	140/100	134	133	5'6"	22	18	90	60	165	1560	I	Two aneurysms. Vision 20/20.	1
F	7	31	24	132/86	155	154	5'2"	45	22	90	60	165	1560	I	Vision 20/30. No hemorrhages.*	....
F	8	28	20	130/86	153	140	5'4"	18	12	90	50	155	1430	I	Vision 20/20. Few punctate aneurysms.*	....
F	16	42	26	140/90	125	125	5'8"	38	12	80	73	182	1705	O	Vision 20/20.*	2
F	3	23	20	121/81	133	114	5'5"	24	10	85	70	170	1650	II	Astigmatic, aneurysms, two exudates.*	....
F	10	32	22	100/80	147	135	5'3"	41	30	100	80	150	1720	I	Vision 20/20. Few aneurysms.	1

*Retinal examination and report by members of American Board of Ophthalmology.

† The extent of severity of retinal changes is on a grade scale of zero to IV.

TABLE 2.—Patients in whom diabetes developed after the age of 18 and who have had diabetes from 20 to 38 years without visual disturbance, although there are minor retinal changes. These patients consistently followed a low calory regimen and they prevented glycosuria and hyperglycemia as constantly as possible. They also avoided obesity. Symptomless hypertension was noted in three persons. Albuminuria was inconsequential when present. There was no evidence of renal disease. This table illustrates the point that visual disturbances can be retarded, although minor grades of retinal changes such as aneurysms, small punctate hemorrhages, etc., may be present for many years.

Sex	Age at Onset	Present Age	Duration, Years	Blood Pressure	—Weight— (Pounds)		Height	—Insulin—		—Present Diet—				Retinal Changes †	Condition of Eyes
					Maximum	Present		Protamine Zinc	Regular	Protein (Gm.)	Fat (Gm.)	Carbohydrate (Gm.)	Calories		
F	39	68	29	170/100	175	144	5'6"	25	....	84	60	175	1580	I	Minor aneurysms.
F	25	49	24	137/100	148	148	5'6"	35	20	90	75	190	1815	I	Few aneurysms.*
M	36	71	35	110/79	157	157	5'11"	40	25	90	80	190	1840	I	Vision 20/20. No aneurysms.*
F	30	67	37	190/90	200	165	5'2"	25	20	85	50	160	1430	II	Several small hemorrhages and exudates.
F	22	43	21	118/72	122	118	5'3"	28	13	90	80	180	1800	II	Few aneurysms and exudates. Vision 20/20.*
M	41	72	31	137/81	230	160	5'9"	35	24	100	75	180	1795	I	Few aneurysms. No exudates.*
M	35	57	22	140/80	204	165	5'8"	27	20	110	75	190	1875	O	No hemorrhages. No exudates.*
F	20	43	23	200/100	106	95	5'0"	22	11	72	72	135	1424	I	Aneurysms and exudates.
F	54	80	26	167/80	180	160	5'6"	24	14	84	60	175	1580	I	Vision 20/25.
F	24	54	29	180/95	166	147	5'5"	30	15	80	38	150	1262	O	No hemorrhages.*
F	26	50	24	192/90	159	127	5'3"	22	14	81	45	120	1209	I	Vision 20/25. Punctate hemorrhages.
F	36	59	23	216/110	187	182	5'8"	32	18	85	50	160	1430	I	Myopic. Macular aneurysms.*
M	28	66	38	160/95	157	135	5'8"	25	14	80	80	160	1680	I	Minor macular aneurysms. No hemorrhages.*
F	26	51	25	127/80	148	148	5'8"	18	15	84	60	175	1580	I	Few aneurysms, minor exudates. Vision 20/20.*
M	20	56	36	143/82	175	165	5'10"	25	20	90	75	190	1815	I	1 or 2 aneurysms. Vision 20/20.*
F	34	56	22	159/79	157	152	5'5"	36	17	80	70	150	1550	II	Few aneurysms. Few exudates.*
F	22	53	31	141/85	153	147	5'10"	38	24	90	75	180	1755	I	Congenital cataract left. Right retina normal.
M	18	41	23	133/70	150	143	5'10"	30	20	100	100	195	2175	I	Vision 20/20. Aneurysms.
M	29	57	28	140/88	170	136	6'0"	32	20	100	120	190	2240	II	Aneurysms. Fresh hemorrhages.
M	45	68	23	127/70	130	96	5'0"	35	25	....	....	....	.....	I	Aneurysms. Vision 20/25.
M	29	56	27	120/79	190	175	6'0"	40	35	100	100	210	2180	I	Old scars, microaneurysms.
M	47	68	21	134/86	230	152	5'7"	0	0	100	75	120	1555	I	Vision 20/20. Microaneurysms only.
F	19	41	22	119/70	132	126	5'9"	36	....	75	75	150	1575	O	No hemorrhages or aneurysms.*
F	51	72	21	138/86	135	119	5'1"	30	20	75	60	150	1530	O	No hemorrhages or aneurysms.*
M	29	55	26	120/79	175	165	5'11"	40	30	100	100	200	2140	II	Microaneurysms and fresh hemorrhages.
F	48	70	22	130/80	148	127	5'6"	20	15	75	70	150	1535	II	Perimacular aneurysms.

*Retinal examination and report by members of American Board of Ophthalmology.

† The extent of severity of retinal changes is on a grade scale of zero to IV.

retinal microaneurysms occur in nondiabetic subjects in association with practically all types of clinical disorders (Figure 2). Microaneurysms, associated with glaucoma in most instances, were observed in 30 of 89 eyes removed at operation. In postmortem examination of 85 eyes of subjects who had had nondiabetic diseases of all types, aneurysms were observed in 29.

As seen with the ophthalmoscope the lesions are round and discrete with very clear outlines and are located in the macular and perimacular areas. They are not associated with the large vessels. Further studies have shown the lesions to be microaneurysms^{4, 1} with endothelial walls. With specialized staining technique and serial sections, afferent and efferent vessels may be clearly outlined (Figure 3). These microaneurysms are located in the inner nuclear layer, and as the overlying structures are elevated, the lesion appears to be spherical or globoid. They vary from 30 to 60 microns in diameter—just within the limits of visual acuity. Light reflex may be noted in many of them. In fresh or stained specimens great numbers can be seen that are not visible on fundoscopic examination. As the lesions progress, erythrocytes may escape through the endothelial aneurysmal wall by diapedesis; also the aneurysm may rupture and definite hemorrhage occur. Fluctuation in intraocular pressure is known to accompany variations in the content of sugar in the blood.¹⁴ Both extracellular and intracellular fluid balance is altered when the content of metabolites in the blood departs appreciably from normal.^{8, 28} In uncontrolled diabetes such fluctuations in retinal capillary pressure would invite aneurysmal hemorrhage owing to interference with the functional integrity of the vascular endothelial lining. Ashton¹ confirmed Ballantyne's report that the globular lesions of the retinal vessels are true capillary microaneurysms.

Curiously, the lesions are confined to the eye.¹ McCulloch¹⁷ reported capillary aneurysms in the conjunctivae in diabetes. Aneurysmal dilations have not been observed in examination of various other tissues from diabetic persons — lungs, meninges, liver, pancreas, brain, pleura, peritoneum, etc. Diabetic aneurysms are round and uniform in size in contradistinction to the elongated and irregular hemorrhage of hypertensive and renal disease, the lesions of which are found in the middle layers of the retina.

If the aneurysms are watched closely, it may be noted that they disappear when the disease is brought under control. This was illustrated in Case 8 (Table 1) of the present series, during the course of pregnancy in a woman 21 years of age with diabetes of 13 years' duration. With the added strain

of advancing pregnancy myriads of round discrete aneurysms were noted in the perimacular area of both eyes. Pregnancy was terminated at the eighth month. Diabetes came under control very quickly and within a month only a few red dots could be seen. This probably represented a rapid advance in retinopathic changes associated with a rapid increase in the metabolic load, a factor which is well known in the relation of pregnancy to diabetes. The author has also observed other instances of disappearance of aneurysms when good control was restored. O'Brien and Allen²⁰ reported that retinopathic changes disappeared after two months of good control in six diabetic persons, all of whom were under 31 years of age.

Most observers report the appearance of the lesions as occurring about the tenth to fifteenth year of diabetes. The time of onset depends upon the degree of dietary control. In Tables 1 and 2 there are instances of diabetes of 25 to 30 years' duration without the appearance of aneurysms. The author can only attribute this to the fact that the patients had adhered to a low calory regimen as closely as possible over the years. The lesions occur much earlier, sometimes within five years, in patients who have flagrantly disregarded diabetic management. Diabetes affects the veins rather than the arteries. The central veins sometimes are very large.

PRESENT SERIES

Some of the patients in the present series have been under the author's supervision for more than 30 years. They were selected for inclusion in the group here reported upon because of long duration of diabetes and their outstanding fidelity, patience and perseverance in adhering to dietary programs, the essence of which is restriction of total calories. They were also selected because most of them came under the author's supervision early in the disease—in some instances on the day of diagnosis—and had never been subjected to high fat or high caloric regimens for a long period.

None of the patients had complaints regarding vision at the time this report was written, and many had normal visual acuity. None had cataracts. In critical examination of the fundus of the eyes, only minor retinal lesions were observed and in some instances there were none. To the patient, good vision is of more concern than minor alterations in the retina. In all the patients the nitrogen content of the blood was normal. Albuminuria was present in only a few instances, and in those it was inconstant and incidental. No abnormalities were noted on microscopic examination of the urine. The blood pressure of all patients was essentially normal (Tables 1 and 2).

Table 1 gives data on patients in whom diabetes developed before they were 18 years of age, Table 2 on those in whom the onset of disease occurred at a later age. Those in the former group escaped not only retinitis but the other hazards related to advancing years, such as coronary occlusion, hypertension and peripheral vascular sclerosis. The latter group escaped renal disease. None of the patients experienced hardship in avoiding the hazard of obesity in diabetes. The patients in the older group were willing to reduce body weight, and those in the younger group avoided obesity. All the patients in the younger group (Table 1) have been under the author's supervision for 20 to 30 years, and at no time had they been on high calory diets. The young female patients have maintained normal vision despite the added burden of pregnancy, in some instances multiple pregnancies.

DISCUSSION

It is an accepted principle in medicine that any process which deviates from normal is not only pathological but harmful. There is abundant evidence that hyperglycemia is harmful, and none at all, as Ricketts^{23, 24} has observed, that it is harmless. There is sufficient evidence that it induces chronic dehydration which is a major factor in tissue injury.⁶ Weight gain of two or three pounds within a period of 12 to 24 hours after restoration of normoglycemia in a person who previously has had uncontrolled diabetes is a matter of everyday clinical experience. Hyperglycemia interferes with the normal osmotic processes in the normal cells.³¹ It is reasonable to assume that body tissues which are constantly bathed in fluids of abnormal chemical composition will undergo pathological change. The development of cataracts in frogs that are confined in hypertonic glucose solution¹⁰ is an academic example. As long ago as 1860, Mitchell^{17a} showed that some accompanying degree of desiccation was necessary in addition to hyperglycemia in order to produce cataracts in frogs. In either event, hyperglycemia is harmful either per se or because of the inevitable dehydration. The fact that hyperglycemia produces degenerative changes in the beta cells of the islands of Langerhans and that these changes are reversible upon restoration of normoglycemia must be considered. Arrest in development of potential diabetes can be accomplished by control of hyperglycemia, as was shown by Watson.³⁴ By the same token it is logical to assume that progression of actual diabetes can be arrested. This was very well illustrated by Sherrill³⁰ in a report on a series of extremely severe cases. Patients soon appreciate the freedom from thirst, polyuria, neuritis, cramps in the legs, blurred vision, pruritus, fatigue, weak-

ness and loss of weight that comes about after hyperglycemia is controlled.

Since ocular aneurysms have been observed in pathologic examination of specimens taken from nondiabetic subjects (although they are not seen on ordinary ophthalmologic examination) question arises as to why the aneurysms in persons with uncontrolled diabetes progress to serious proportions whereas ordinarily they cause little trouble when associated with other diseases. It must be assumed that uncontrolled diabetes is the deciding factor, and therefore that hyperglycemia is harmful. In uncontrolled diabetes there is also a disturbance in the nitrogen balance, which brings about the dearth of protein in the plasma that occurs in patients with untreated diabetes of long standing. The relationship of low content of protein in the plasma to retinal hemorrhages is known, and it has been shown that vision and the retinal condition can be improved with adequate treatment and high protein feeding.

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Gamma Globulin Distribution

THE OFFICE OF DEFENSE MOBILIZATION has taken over responsibility for distribution of gamma globulin for use in treatment of paralytic poliomyelitis, infectious hepatitis and measles. Details of distribution are being evolved by a National Research Council committee of physicians. It is understood the plan contemplates distribution of the central supply of gamma globulin to state health officers, who will be responsible for its final local use.—*A.M.A. Washington Letter*.

Mental Medication for Your "Sick" Patient

JOHN B. LONG, M.D., Sacramento

WE LIVE IN A civilization of mental and moral confusion, and *we are all neurotic*. The very awareness that one is not as perfect as he would like to be produces distress. At various times every intelligent person has some form of neurosis, with acute exacerbations and remissions. A neurotic person is anyone who experiences physical symptoms from emotional stress.

In every person there exists a Dr. Jekyll and a Mr. Hyde living within the same brain and engaged in a continual struggle for expression. The resultant conscious and subconscious strain is expressed not only as emotional tension but also as physical illness. Each person, in addition to the struggle within himself, is engaged in a persistent struggle with his environment in order to gain the necessities of life. The restrictions of society create many difficulties in our fight to gain personal significance, self-confidence, prestige, sexual satisfaction, and other normal human cravings. Whenever environmental stress becomes too great, or when mental conflicts become overwhelming, neurotic symptoms follow. In most cases the symptoms result from various combinations of both external and internal struggles. Life is synonymous with conflict, from the cradle to the grave. This concept of the *normalness of a neurosis* has helped the author to see a way through the confusing maze of symptoms presented by the average patient.

THE ROLE OF THE GENERAL PHYSICIAN

Since the diagnosis of mental or emotional illness is frequently considered an insult by patients or by their relatives, the attending physician is faced by two alternate modes of practice: that of attributing all of the symptoms to the minor physical abnormalities observed, or that of taking the time and effort, at the risk of offending, to adequately explain how each symptom may express a combination of physical and emotional factors. The latter course, which entails convincing a person who does not want to be convinced, requires art, skill and patience. It is the hard course of medical honesty.

All that may be needed for most patients is a bit of reassurance and friendly advice; often calm-

• Essential stages in a type of superficial psychotherapy that has been found to be generally effective in treating a patient with "normal" neurosis are: A complete medical health evaluation, achievement of the patient's confidence, a description of all findings and a convincing explanation of how certain symptoms may be caused by nervous tension, and appropriate medical treatment combined with encouragement, inspiration and common-sense advice.

The "sick" patient should be convinced of the true cause of the symptoms that distress him, taught to recognize the neurotic basis of symptoms, and at times to accept and live with them. The fundamental ingredient of psychotherapy of this type is emphasis on developing a confident and purposeful way of life. Each patient should be encouraged to help himself in a determined effort to acquire peace and harmony both within himself and with his environment. Differences in personality and environment vary the treatment and advice best suited to each patient.

A proper attitude by the physician is a major factor in the effectiveness of treatment.

ing a fear may help the patient to weather an emotional storm. The explanation of how distressing physical symptoms can be produced by distressing thoughts frequently brings about the return of sufficient happiness and health to make further medical care unnecessary for long periods.

* Other patients may need repeated medical attention and reassurance. How convenient it would be to send these troublesome and time-consuming patients to a psychiatrist and let him worry about them. But physicians in general practice have learned that, for several reasons, this is seldom possible. Often it is necessary to continue to care for patients who may remain almost continuously fearful, fatigued, complaining and ill. It is easy to become discouraged in attending these intrinsically neurotic and often incurable persons unless it be borne in mind that many organic conditions also can be only partially alleviated and not cured. It is helpful to remember that repeated reassurance given

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to a chronically "sick" person is an essential part of treatment.

The great bulk of functional disease, both acute and chronic, has been by necessity managed by personal physicians rather than by psychiatrists. Although this type of care may not always be the best for the most severe constitutional neurosis, still the general practitioner is in a better position than the psychiatrist to treat ordinary neurosis. One obvious reason is that the most prominent symptoms of emotional tension are those of physical dysfunction, which the patient interprets as owing to organic disease. The patient goes to his attending physician for relief of headache, palpitation, fatigue or indigestion. The confidence the patient places in his own doctor to diagnose and treat his physical sickness is of great value in effective psychotherapy. Reassurance that the distressing physical symptoms are the normal bodily reactions to emotional tension can best be accepted from the one who has just conducted a complete health evaluation.

Physicians in general practice, each in his own way, attempt to treat both the organic and functional ills of their patients. In no phase of the practice of medicine, however, is there a wider range of equally effective methods than in the treatment of functional illness. Probably no two physicians treat neuroses in the same way, but each has developed a treatment method which, for him, is effective.

The author, in discussing his own way of treating patients with a neurosis, will not attempt to present scientific facts but only ideas, concepts, opinions and practical suggestions that have been gathered from various persons, lectures and books.

STEPS IN TREATMENT

Obviously, the first and most important step in psychotherapy for the "sick" patient is a complete medical examination. This includes whatever laboratory and x-ray studies may be needed to verify the clinical diagnosis and convince the patient that the physician is giving due consideration to physical complaints.

The second essential is to convince the troubled patient that he is being treated by a capable physician who understands the patient's illness, and knows what to do about it. The patient must be convinced that the physician likes him as a person and can show him the way to physical and emotional health if he is willing to follow.

The third step is a description of all physical, laboratory, x-ray and emotional findings, and next how they are related to each symptom. It is essential that the patient be made to understand that nervous tension is average and normal, and that it occurs almost exclusively in intelligent, sensitive, kindly and essentially good people. Explanation of how the

symptoms can be produced by nervous tension must be both convincing and acceptable.

The fourth step is the administration of appropriate medical treatment mixed with sufficient common-sense advice and encouragement to bring about symptomatic relief. With the relief of distressing symptoms the patient gains new faith in the physician, in himself and in the world about him. With faith comes a willingness to accept a diagnosis of functional illness and a desire to develop a more wholesome "way of life."

Usually three or four visits are required for the average neurotic patient. On the first visit, after the physical examination has been completed, the purely organic conditions are described and appropriate treatment is outlined. Next comes an attempt to convince the patient first that his symptoms are well understood, and second that these symptoms can develop from nervous tensions. The patient is then encouraged to discuss his problems and disturbing thoughts. After the patient has finished talking, a few words of sympathy and reassurance are followed by a brief discussion of whatever environmental manipulation might obviously be helpful. One should be careful not to tell the patient what he should do, but, by asking leading questions, to help him reach a solution himself. The visit is usually concluded with an optimistic assurance that the symptoms will disappear as the emotional problems are corrected. Usually sedative medication is prescribed to speed relaxation and symptomatic relief.

On the second visit a few portions of the physical examination are rechecked. The laboratory and x-ray findings are explained. The final diagnosis is then given—again listing organic conditions first. The patient is encouraged to talk further about his problems and what he intends to do about them. Some reference may be made to the frequency with which poor sexual satisfaction is associated with emotional problems. This approach may open the door to a discussion of a major factor in the production and continuation of tension. No attempt is made to delve deeply into the guilt complexes or disturbing psychosexual aberrations of early life. In fact all discussions with the patient are conducted with a reassuring emphasis upon helping him, a normal person, to face life with a better understanding and a greater peace of mind. The patient is encouraged to change things that should be changed, but to accept situations that cannot be changed. It is helpful to advise the patient to try to live one day at a time to the best of his ability, giving no thought to the mistakes of yesterday or to the insecurities of tomorrow. The second visit is often concluded by a gift to the patient of the little book *A Way of Life* by Sir William Osler.

Further details of therapy cannot be standardized. Various personality patterns, differing religious beliefs, and specific environmental factors determine what type of subsequent therapy would be best suited to each patient. An understanding of how environmental trauma can injure a sensitive personality sufficiently to produce physical illness will in most cases reveal to the patient what must be done to remedy the situation. One patient may decide to change some phase of his environment, another may change himself, and still another may attempt to do both. One patient may find peace of mind by accepting the inevitable, another by accepting the sustaining comfort of religious faith. All patients are benefited to some degree by kindly guidance in their search for happiness and emotional security. With the aid of a practical philosophy they can be helped to regain self-esteem and self-confidence. Personal significance is established by focusing their attention upon a recognition of their worthiness and upon their capability to bring happiness to others. They are urged to look for the beauty in life and for the good in others. They are assisted in their attempts to balance the ever-present hates and resentments with tolerance. They may be cautioned not to expect perfection in themselves or in those with whom they live and work. They are reminded that life does not offer security, only opportunity. They are urged to concentrate upon *something to live for* if they would make the battle of life more endurable. They are encouraged to develop *enthusiasm for a cause*, for *earning happiness* by giving happiness. They are persuaded to face each day with a determination to concentrate their efforts and attention upon doing, one at a time, those things that can be done—to crowd disappointments and uncertainties out of their minds by substituting fruitful activity.

AVOIDING DEEP-LYING CONFLICTS

Admittedly this is a very superficial form of psychotherapy, but that is intended. It must always be kept in mind that it may not be wise for physicians who are not psychiatrists to probe too deeply into the repressed complexes or psychic irregularities of all patients. Neurosis itself may be an essential and necessary part of some personalities, and to remove the physical symptoms caused by it might expose the patient to an even more excruciating mental pain. A physician might bring great harm to some patients by emphasizing their abnormalities, by discovering repressed sexual deviations, or by exposing subconscious shame-producing urges. Certain danger signals that indicate a major mental disturbance must be recognized, and when they are observed the patient would best be referred immediately to a psychiatrist or placed in protective cus-

tody. Psychiatric symptoms of that order are: hallucinations, delusions, emotional extremes with suicidal or violent tendencies, obsessive compulsive rituals, depressions with withdrawal symptoms and excessive feelings of unworthiness.

THE PHYSICIAN'S ATTITUDE

It is admittedly difficult for a busy physician adequately to treat the multitude of functionally ill persons. He may find it relatively easy to devote the necessary time to patients whom he spontaneously likes, but the greatest challenge in the general practice of medicine is to deal properly with patients who are unpleasant and unhappy, irritable and antagonistic, whining and complaining, depressed and discouraged.

To help them, a physician must gain their trust and faith. And to do that, the physician himself must be emotionally oriented to the task. He must first of all believe that it is worth while, and he must have honest sympathy for the patient's suffering, whether the cause be physical or emotional. He must believe that a degree of self-respect and peace of mind is essential to both mental and physical health. In short, he must have a conviction before he can convince. If he can develop this conviction he will be a more effective therapist. From a more selfish point of view, any attitude that improves a physician's relations with difficult-to-handle patients should make his work easier and happier. Some concepts and rules that have been helpful in this matter are:

1. *Appeal to the natural desire of each patient for approval and respectability.* Don't resort to flattery, but look for qualities that you can genuinely admire. There is both good and bad in every man; speak to the good and the good will answer. This is especially true of those who may be antagonistic and emotionally insecure. Talk up to each patient, not down to him.
2. *Make a habit of attempting to place yourself in the patient's position.* View the symptoms and problems through his eyes. Never suggest a course of action which the patient cannot or would not be likely to follow, even though such action would appear to be logical.
3. *Think of each neurosis as normal.* Assume that the neurotic patient is an average and intelligent person who is troubled by a combination of problems which is beyond his understanding and control. View and speak of his symptoms as normal manifestations of environmental injury to a sensitive personality.
4. *Consider all illness as a combination of both organic and emotional factors.* Don't think in terms

of whether the cause is organic or functional, but rather of what combination of these two factors produces the symptoms.

5. *Keep bolstering the self-esteem and self-respect of each patient.* Refrain from ridiculing or minimizing the importance of his complaints. Present the diagnosis and treatment in such a way that it can be accepted without humiliation to the patient.

6. *Remember that what you say can produce illness, as well as cure.* Talk and act confidently about what you do know, but never share with your patient your doubts and uncertainties. Don't tell the patient that he has no physical disease and then cause doubts in his mind by ordering more tests or making repeated appointments.

7. *Keep in mind that most emotional wounds will heal with time,* but the timely application of helpful advice can speed recovery and prevent disabling scars on the patient's personality.

Despite honest effort to follow all these ideas in the treatment of an emotionally upset patient, a physician will occasionally attend a patient toward whom he feels antagonism. When this occurs, the physician should recognize his own resentment and refer the patient to a colleague who probably will not have to struggle with a similar antagonistic feeling. As a general rule, however, the treatment of a neurotic patient can actually be a pleasure for the physician if he develops the proper frame of mind.

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Army Reviewing Physical Records of 1,000 Priority-3 Physicians

THE ARMY SURGEON GENERAL has asked area surgeons in the U. S. to review records of about 1,000 priority-3 physicians who were deferred for physical reasons prior to lowering of physical standards. A number of doctors in this group are expected to be found fit for duty. Under lowered standards announced last month, each case is decided on its own merits. Generally, the armed services are taking the position that if a doctor is physically able to carry on a private practice then he is fit for military service.

Since the Defense Department announcement on lowered standards, the Army has sent to Selective Service for reevaluation the names of 739 deferred physicians in priorities 1 and 2. Of this group, 487 have received physical examinations.—A.M.A. *Washington Letter*.

Lymphoblastomas in Childhood

Cutaneous Manifestations

LAWRENCE M. NELSON, M.D., Santa Barbara

THE TERM *lymphoblastoma*, while open to certain legitimate criticism, has become fixed in medical literature and, to dermatologists at least, has a very definite meaning. While not all dermatologists agree as to just what conditions should be classed as lymphoblastomas,¹ most of them consider mycosis fungoides, leukemia, lymphosarcoma, and Hodgkin's disease to be the more important members of the group.^{4, 52} Among the less important and even debatable members are lymphocytoma cutis and Spiegler-Fendt sarcoid. It is generally agreed that Spiegler-Fendt sarcoid should be classed as a lymphoblastoma.^{17, 39} Spiegler's⁶³ patients with this disease died, as did Sweitzer's,⁶⁶ and one of Lewis's.⁴⁰ However, Fendt²¹ did not give so bad a prognosis, and some of his patients either responded to therapy or had spontaneous resolution of the lesions. Bafverstedt² recently reclassified as lymphocytoma cutis many cases originally considered to be Spiegler-Fendt sarcoid. Lewis,⁴¹ in discussing the paper of Loveman and Fliegelman,⁴³ stated that "from the evidence given by the authors, it would seem that the disease under discussion is identical with the localized form of Spiegler-Fendt sarcoid." While some observers feel that lymphocytoma cutis is always benign,^{17, 43, 49} others do not share that view,^{41, 48, 65a} and all agree that prolonged and careful observation is necessary to make sure there is not malignant change. Even though the question of the exact relationship of these two conditions to each other and to the other lymphoblastomas has not been settled, the author looks upon lymphocytoma cutis as a relatively benign lymphoblastoma. The condition must be considered in the differential diagnosis of the lymphoblastomas, and while it apparently remains benign in most cases, it may become malignant. In the present discussion Spiegler-Fendt sarcoid and giant follicular lymphoma will be placed in the lymphosarcoma category.^{17, 31, 54, 64}

Since, to the best of the author's knowledge, no report of reticulum cell sarcoma in childhood (other than in bone³¹) has appeared in the literature, any discussion of its place in the classification will be omitted.

• The lymphoblastomas occurring in childhood are divided for purposes of discussion into lymphocytoma cutis, mycosis fungoides, lymphosarcoma, Hodgkin's disease, and leukemia. The cutaneous lesions may be either specific (as a result of the infiltration of the skin with specific cells of the conditions) or toxic (non-specific). With the possible exception of mycosis fungoides, the cutaneous manifestations are not diagnostic. The final diagnosis depends upon microscopic examination of the specific tissue involved and the coordination of the clinical and microscopic findings.

Of the leukemias, the acute form is the most common in children. Chronic myeloid leukemia is uncommon, and chronic lymphatic leukemia does not occur.^{12, 13}

Lymphocytoma cutis, mycosis fungoides, lymphosarcoma (including Spiegler-Fendt sarcoid and giant follicular lymphoma), Hodgkin's disease and leukemia have been reported in preadolescent children. Because the statistics on the lymphoblastomas are for the most part given in relation to decades of life, lymphoblastoma occurring in the first two decades (rather than before puberty only) will be considered in this presentation.

Lymphocytoma cutis (benign lymphadenoid granuloma of the skin, miliary lymphocytoma, lymphadenosis benigna cutis) is rare in childhood. The youngest patient of record, a four-year-old child observed by Kaufman-Wolf,³² had lesions on the scrotum. Localized lesions are the form usually seen in children.² Loveman and Fliegelman⁴³ and Mopper and Rogin⁴⁹ have reviewed the literature and have reported cases in adults. The clinical appearance varies considerably, and the lesions may resemble epithelioma adenoides cysticum, rhinophyma, moles or basal cell epithelioma. Rarely if ever do the lesions ulcerate. Becker⁵ stated that when pressure is applied to a glass slide on the skin, an apple jelly color persists, as in lupus vulgaris. Long observation and repeated studies of the blood and bone marrow are necessary to rule out malignant lymphoblastoma.

Mycosis fungoides (granuloma fungoides) is es-

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essentially a disease of adults, although occasionally it occurs during the first two decades of life.^{29, 42, 52, 56, 59} Apparently the youngest patient was a three-year-old boy reported upon by Hathaway.²⁹ He had a single lesion on the face, which responded to x-ray therapy. Ormsby and Montgomery⁵² cited a report of mycosis fungoides in a child six years of age.

There is nothing in the literature leading the author to believe that mycosis fungoides in children differs in any way from that in adults. Mycosis fungoides usually begins as plaques of a rather non-descript scaling, pruritic dermatitis (the premycotic stage). The plaques become infiltrated, and tumors, which eventually ulcerate, develop. The condition spreads, and ultimately causes death. Although mycosis fungoides may remain localized to the skin throughout its course, not infrequently it becomes a generalized systemic disease with features like those of leukemia or one of the other types of lymphoblastoma.^{36, 38, 46, 47, 52, 73} In the premycotic stage, diagnosis may be difficult or impossible. By the time infiltration and tumors appear, the syndrome is quite characteristic. Pruritus may be severe in all stages of mycosis fungoides. Occasionally pruritus alone is the initial symptom. Mycosis fungoides may also begin as poikiloderma atrophicum vasculare or as a poikiloderma-like eruption.^{51, 69} It may resemble psoriasis, or it may begin as tumors with ulceration (the d'emblee type). Occasionally it begins as erythrodermia.^{46, 59}

Leukemia, Hodgkin's disease, and lymphosarcoma have many cutaneous symptoms in common and for the purposes of this presentation can be considered together. First, however, it might be well to discuss the two special varieties of lymphosarcoma, Spiegler-Fendt sarcoma and follicular lymphoblastoma (follicular lymphoma, follicular type of malignant lymphoma, giant follicular lymphadenopathy, giant lymph follicular hyperplasia of lymph nodes and spleen, Brill-Symmer's disease), because each of them has a cutaneous picture quite different from that seen in typical lymphosarcoma. Both conditions are rare in childhood.

Spiegler-Fendt sarcoma appears in either a localized or disseminated form. Both forms occur in children.⁴⁰ The cutaneous manifestations of the localized form are apparently identical with those described under lymphocytoma cutis. In the disseminated form, generalized cutaneous or subcutaneous nodules, up to 2.5 or 3.0 cm. in diameter, develop. Plaques sometimes appear. The color of the skin varies from normal to deep crimson or deep red. The nodules grow to a certain size and then are static. Spontaneous regression occasionally occurs.

Follicular lymphoblastoma has been thoroughly reviewed by Gall and co-workers²⁴ and Combes and Bluefarb.¹⁰ Gall, in a review of 69 cases, noted that in 3.5 per cent of them the onset was before the patient was 20 years of age. Eighty-nine per cent of the patients had peripheral lymph nodes, and 5 per cent of them had cutaneous involvement which consisted of "a few isolated, raised, firm, brownish to reddish nodules." It was reported that no diffused lesions were observed. Herpes zoster occurred in three cases. Combes and Bluefarb reviewed reports of 72 cases in the literature, and reported on 15 patients they had observed, 14 of them males. The youngest patient in the series of 87 cases reviewed was 15 years of age, the eldest 80. In the 15 cases Combes and Bluefarb had observed, the skin conditions resembled those of allergic eczema (including exfoliative dermatitis), chronic discoid and lichenoid dermatitis, and a third condition that was clinically diagnosed as mycosis fungoides. One patient, aged 17, had dermatitis resembling chronic discoid and lichenoid dermatitis, associated with giant follicular lymphadenopathy of two years' duration. Microscopic examination of the skin was carried out and the disease could be classified only as "chronic dermatitis."

The cutaneous symptoms of typical leukemia, Hodgkin's disease and lymphosarcoma are usually divided into the toxic or nonspecific lesions, and specific lesions—those containing true tumor cells. This division is not absolute, for so-called toxic lesions may contain tumor cells.^{25, 39} In addition toxic lesions may later be the site of development of specific lesions, and sometimes tumor cells may be present in skin which, to clinical observation, seems normal.^{22, 35} Specific lesions may develop at the sites of skin lesions in no way related to the lymphoblastoma (varicella,²² trauma³⁵). The nonspecific lesions are in no way characteristic, but may be suggestive of the underlying condition. Almost every type of lesion the skin is capable of producing may occur. Pruritus, either with or without skin lesions, is common. Pigmentation, macules, papules, lichenification and exfoliative dermatitis may occur,²⁵ and also bullous lesions,^{17, 60} pustules, and vesicles.⁷⁵ Alopecia, atrophy, dryness and hyperkeratosis have been reported. Icterus, urticaria and bouts of unexplained hyperhidrosis may develop.⁹ Herpes zoster may complicate almost any of the lymphoblastomas.^{8, 72}

Especially in leukemia, hemorrhage in the skin and mucous membrane, stomatitis, noma, pallor and enlargement of the abdomen are not infrequent.¹⁸ Some symptoms, such as dyspnea, cough, intestinal obstruction, abdominal pain, nausea, vomiting and diarrhea, may be owing to the clinical location of

the tumor mass, and are not characteristic of lymphoblastoma.^{11, 15, 44, 53} Anemia and fever occur some time during the course of the disease in most patients. The so-called Pel-Ebstein fever is said to be quite characteristic of Hodgkin's disease, but may occur in other conditions also.

The cytologic structure in nonspecific cutaneous lesions is, of course, not characteristic and unless by good fortune specific cells are observed in the section, histologic examination can be of little help. However, as the underlying condition is usually pronounced, histologic identification may not be necessary for diagnosis.

Specific cutaneous lesions may consist of generalized exfoliative dermatitis (which may also occur as a nonspecific symptom), cutaneous or subcutaneous nodules, as well as tumors and plaques, and enlarged lymph nodes. Ulceration occasionally occurs, particularly in Hodgkin's disease.^{60, 67, 73}

A special word should be said about chloroma, which is a manifestation of acute leukemia.¹⁷ Over 50 per cent of the patients with these greenish tumors are under 20 years of age. The tumors may be cutaneous or may be located in positions to cause symptoms owing to pressure on adjacent organs.

The final diagnosis in any of these conditions depends upon the examination of specific tissue, be it skin, lymph node, bone marrow or blood, and the coordination of the clinical and microscopic observations.

Prognosis. The course of all the lymphoblastomas seems to be somewhat more rapid in children than it is in adults.^{14, 62} However, there is great variation from case to case. Leukemia, in particular, usually runs an acute fulminating course. Follicular lymphoma and Spiegler-Fendt sarcoid progress much less swiftly than does typical lymphosarcoma. Lymphocytoma is usually benign.

Treatment. Lymphocytoma is very radiosensitive and, while it responds to radiation therapy, recurrence is the rule.^{43, 49} It is also said to respond to arsenic. Excision may be curative.^{65b} Occasional spontaneous remission occurs in this condition, as it does at times in other types of the lymphoblastomas.

Bierman⁶ has given a very complete review of the treatment of the other lymphoblastomas. Follicular lymphomas frequently respond to x-ray therapy or to surgical excision. Single focus lymphomas may be removed surgically, and that treatment followed with intensive x-ray therapy (until further evaluation proves the latter to be of no additional value). In acute leukemia of childhood, radiation therapy, urethane and nitrogen mustard are of little or no value.⁵⁴ The most satisfactory treatment seems to be administration of the folic acid antag-

onists.^{16, 19, 20, 30, 54, 70} Leukemia in adults does not respond to folic acid antagonists as well as does the disease in children.^{16, 19, 30} Toxic symptoms are common, and at best the treatment is only palliative. Radioactive substances are still in the experimental stage. Nitrogen mustard is palliative in Hodgkin's disease, lymphosarcoma and mycosis fungoides. It is also somewhat effective in giant follicular lymphoma. Its use is frequently complicated by granulopenia. Triethylene melamine has about the same action as does nitrogen mustard.⁶¹ Colchicine has resulted in temporary improvement in some cases of mycosis fungoides.⁶⁸ (The author has under observation a man believed to have mycosis fungoides. He had relief of pruritus for four months from colchicine by mouth. It was then no longer effective.) ACTH and cortisone are temporarily helpful in some cases of lymphoblastoma. Some patients are made worse.^{37, 55, 57}

DISCUSSION

It should be stressed that the clinical manifestations of these conditions, with the possible exception of mycosis fungoides, are not specific or diagnostic. The classification of a patient with lymphoblastoma, or even the diagnosis of lymphoblastoma, may be difficult and require prolonged observation.^{9, 36, 46, 64} The difficulty is well illustrated by the case of a patient who was presented before a meeting of the Los Angeles Dermatological Society.⁵⁰

The patient, a 9-year-old white boy, was first observed by the author March 17, 1951, because of a lesion "like a little boil" which had appeared on the left side of the nose two or three weeks previously. No pus was expressed from the lesion and no similar lesion had ever been present before. There was no history of injury preceding onset. Upon examination the lesion was observed to be a semi-hard erythematous nodule 1.2 cm. in diameter. The submaxillary nodes were not enlarged. The left anterior cervical lymph nodes were possibly enlarged, as was one in the left axilla. No abnormalities were noted upon examination of bone marrow. Results of examination of the blood and the urine were within normal limits. Only chronic inflammation was noted in microscopic examination of a left cervical lymph node that was removed April 2, 1951. The lesion was excised in toto April 12, 1951. A year later there was no evidence of recurrence.

It was generally agreed by those attending the presentation of the patient that the lesion was lymphoblastoma of some type. Winer⁷⁴ favored a diagnosis of reticulum cell sarcoma. Subsequently, the sections were studied by other dermatopathologists and pathologists, with the following diagnoses: Cutaneous lymphoblastoma, possible cutaneous reticuloendotheliosis, possible Letterer-Siwe disease, and probable cutaneous lymphoma.

Diagnosis and classification of these conditions are not helped by the fact that some patients show

characteristics of more than one of the lymphoblastomas. Keim³⁴ reported a case (Case 10) in which there was evidence of mycosis fungoides and lymphatic leukemia. In a case reported by Miller⁴⁵ (Case 4) the pathologic changes of Hodgkin's disease were noted in 14 lymph nodes, whereas in one node the structure was characteristic of small cell lymphosarcoma. Ginsburg^{26, 27} found little biologic difference between lymphosarcoma and Hodgkin's disease, and pointed out that there is no clinical way of differentiating them. The histologic structure is not always diagnostic. Perhaps lymph node imprints⁴⁷ will help in differentiation. The observation that some lymphoblastomas apparently change from one type to another, and that transition forms exist between all the groups,^{4, 23, 38, 39, 70, 73} does not help to clarify the situation.

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Film Library Has Record Year

RALPH P. CREER, secretary of the A.M.A. Committee on Medical Motion Pictures, reports that 2,088 medical motion pictures were lent to medical societies, medical schools, hospitals and other scientific groups during 1952. This represents an increase of 516 over 1951, and is the greatest number of films distributed since the A.M.A. motion picture library was started.

—A.M.A. Secretary's Letter

Regional Anesthesia for Office Procedures

CHARLES F. McCUSKEY, M.D., Los Angeles

THE TYPE OF WORK that it may be necessary for a physician to do in his office depends to some extent upon the location and availability of hospital facilities, but the basic principles for the successful use of regional anesthesia must always be observed whether the procedure is done in the office or in a hospital.

Before any injection is started the patient should be quizzed to ascertain if he has any known idiosyncratic reaction to local anesthetic agents or other drugs.

Oxygen with a breathing bag and mask should always be available and ready for immediate use.

An ultra short-acting barbiturate for intravenous use should be readily accessible. Barbiturates do not prevent untoward reactions to local anesthetic agents but they will control the convulsions resulting from an overdose of procaine and thereby make it possible to keep the patient oxygenated until the toxic effects have worn off. Since the safer local anesthetic agents paralyze respiration well ahead of cardiac effects, if the patient is kept well oxygenated no permanent ill effects should result from an overdose or from accidental intravenous injection. In addition to the precautions already noted the following points should be adhered to:

1. Asepsis.
2. Aspiration must always be done before injection through a stationary needle.
3. Anesthetic solutions should be freshly prepared for each patient.
4. Epinephrine solution 1:1000 should be added to the anesthetic solution just before injection. Not more than six minims should be added to each 100 cc. of solution.
5. Epinephrine solution should not be used in patients with toxic thyroid disease or severe cardiac disease.
6. Adequate preliminary medication should be used to allay nervousness and fear. (If the patient is alone, this may be omitted in office procedures.)
7. Care should be exercised to avoid trauma to periosteum and bone.
8. Injections should be made extraneurally.

Presented before the Section on Anesthesiology at the 81st Annual Session of the California Medical Association, Los Angeles, April 27-30, 1952.

- *Many minor surgical procedures can be performed successfully and safely with regional anesthesia in an office which is properly equipped.*

A careful history and physical examination should never be omitted. Oxygen with a breathing bag and mask and an ultra short-acting barbiturate for intravenous use should always be available and ready for immediate use.

When proper aseptic technique and the previously mentioned precautions are observed, the variety of diagnostic and therapeutic blocks and minor surgical procedures which can be performed in an office will depend upon the ability of the physician using them.

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9. Operation should not be started until anesthesia is complete.

The local anesthetic agents commonly used are procaine, intracaine and metycaine. The toxicity of these agents is in the order named, procaine being the least toxic. It should also be remembered that 20 cc. of 2 per cent solution is more likely to produce an untoward reaction than 40 cc. of 1 per cent solution. The solution used, therefore, should be freshly prepared in each case and the strength of the solution used should not be greater than the size of the nerve to be blocked requires. For larger nerves, such as those in the brachial and sciatic plexuses, stronger solutions are necessary. Never should the strength of procaine or intracaine solutions exceed 2 per cent.

Untoward reactions are produced by the intravenous injection of the anesthetic agent or by the rapid absorption of the agent from a highly vascular area. The symptoms vary according to the dose. Following rapid absorption the pulse may increase or decrease; dyspnea, pallor, nausea with or without vomiting; cyanosis; cold, clammy skin and the usual manifestations of shock may follow. Following intravenous injection there may be a convulsion with temporary loss of consciousness, slowing of the pulse, and slowing or complete cessation of respiration. The treatment for either is: (1) 100 per cent oxygen, by artificial respiration if necessary; (2) intravenous administration of pentothal, nembutal or seconal; (3) stimulants, such as caffeine or cora-

mine; (4) intravenous infusion of plasma or dextrose or saline solutions.

The regional blocks most often called for in office procedures are those for minor procedures and diagnostic or therapeutic blocks. Before attempting any of these procedures it would be well to practice the proper method of raising a skin wheal which must precede insertion of a needle into the tissues. In raising a wheal anywhere on the surface of the skin, a minimum of pain will be produced if the bevel of the fine gauge wheal needle is held parallel to the surface of the skin and a slow extrusion of the solution is begun just before the needle makes contact with the skin. In other words, the needle is pushed through a drop of solution on the skin and the injection is continuous as the needle enters the skin. Pressure is maintained until a wheal of the desired size is obtained. A long 22 gauge needle is then attached to the syringe in order to produce a field block. It is pushed sharply through the wheal and then, as solution is slowly injected, is advanced beneath the surface of the skin. During this maneuver the bevel of the needle is kept downward. When the general area for a change in direction is reached, a wheal is made in the skin by injection from beneath into the lower layers of the skin. Done in this manner, the entire procedure is almost painless. Four such wheals with connecting lines of infiltration will block off the area to be operated upon.

For procedures about the face and scalp, either a field block or a nerve block may be used, the choice depending on the location of the area in which the operation is to be done. The infraorbital and mental nerves are the most accessible for blocking about the face and when they cover the entire field of operation it is a very easy procedure. The scalp receives its nerve supply from the trigeminal or the cervical plexus. From the supraorbital ridge to the vertex of the scalp, the nerves of supply originate from the trigeminal nerve and are distributed as the supra-trochlear, supraorbital, zygomatico-temporal and superficial temporal nerves. In the back of the head, from the root of the neck to the vertex, the great auricular, lesser occipital, great occipital and least occipital nerves supply the scalp. All these nerves may be reached at some point on a band circling the scalp. Unless the location of each is known with great exactitude it is far better to place a band of interlocking deposits of solution along the "hat band" beneath the galea than to add to any pre-existing trauma by searching for the elusive nerve trunks.

Stellate ganglion blocks, whether for therapeutic or diagnostic reasons are feasible from several approaches. The lateral approach probably entails less risk than some others. In the method used by the

author the patient flexes his head slightly in order to loosen the muscles of the neck. The transverse process of the sixth cervical vertebra is then sought by palpation with the index finger. When it is located, the finger with pressure maintained is slid downward until the transverse process of the seventh cervical vertebra is felt. Pressure is then applied medially and posteriorly in order to displace the great vessels of the neck from the path of the injection. That done, the needle is advanced medially perpendicularly to the midline of the body and slightly posteriorly until contact is made with bone. Contact usually occurs after the needle has been advanced about one centimeter, since all of the softer, displaceable structures are retracted out of the path of the needle with the index finger of the other hand and held back until block is completed. It is important that the needle be kept well above the clavicle lest the dome of the lung be punctured.

Lumbar sympathetic blocks are best done with the patient in a prone position and with a small pillow under the hips. Wheals are raised 3 to 4 finger breadths from the midline directly opposite the upper edge of the vertebral spine. The 4-inch needle, detached from the syringe, is advanced perpendicularly until the point impinges on the transverse process. In passing it may be well to note that the lumbodorsal fascia is very tender and a few drops of solution may be required to render passage of the needle painless. To do this, a small amount of solution is deposited on the periosteum of the transverse process. The needle is then withdrawn until the point is just beneath the skin. It is then reintroduced with a cephalad inclination and passed over the upper edge of the transverse process. Given a medial inclination, the point of the needle will make contact with the side of the body of the vertebra. In this position the needle is advanced from 2 to 3 cm. past the point at which contact was made with the transverse process. With this technique injections are made of L2, L3 and L4 to block the vasomotor supply of the lower extremity.

Blocks of the upper extremities can be accomplished by brachial block or by median and ulnar blocks at the elbows, or each digit can be blocked individually. On the hand or fingers the initial wheal should be raised on the posterior surface and the needle advanced from there to the front. Care should be taken not to inject too much solution around the fingers. Pressure from too much solution, particularly when it contains epinephrine, can cause permanent damage such as would be produced by applying a tourniquet. Older people with preexisting vascular disease are particularly liable to difficulty of this kind.

With proper care and gentleness many things can

be done safely and comfortably in a physician's office. It should be emphasized, however, that all proper precautions should be observed to prevent untoward reactions and that preparations be made to treat them should they occur.

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Discussion by FREDERICK LEIX, M.D., Los Angeles

Especially to be stressed are the basic principles of regional anesthesia which have been outlined. One of these, skin preparation, has undergone revision in the past few years. It seems reasonable that the same treatment should be accorded the skin overlying the area to be anesthetized and operated on as that given the hands of the operating surgeon. A soapy vehicle containing hexachlorophene (G-II) serves well for this purpose. The lathering and rinsing with quantities of water should be pursued for several minutes. The type of antiseptic solution used to paint the skin thereafter should be aqueous rather than an alcoholic tincture, because alcohol destroys the effect of hexachlorophene.

In my own observation, few practitioners perform regional blocks of the sympathetic nervous system as office procedures. For those who do so there are two warnings I would sound. A possible candidate for lumbar sympathetic block is a patient with acute thrombophlebitis of the lower extremity. Frequently he is receiving dicoumarol as an anti-coagulant agent. Deep bleeding may occur in such a patient as a result of needle trauma, even to the extent of massive

retroperitoneal hematoma. A fairly common complication of stellate ganglion block is pneumothorax owing to puncture of the apex of the pleura and the cupola of the lung. The method described by Dr. McCuskey stresses high injection of the blocking agent as a safeguard.

There are two practical points which I should like to mention.

Finger lacerations are frequently treated in the office. An ideal anesthetic is achieved by blocking the digital nerve opposite the midpoint of the proximal phalanx with 1 per cent procaine solution. This anesthetic agent should never contain epinephrine, should be small in amount (1 to 2 cc. for each nerve), and should be used on one side only whenever possible. A bloodless field may be obtained by the use of a soft rubber urethral catheter applied as a tourniquet for a short time (5 to 10 minutes). It is possible to cause ischemic necrosis of the finger or toe if these precautions are not observed.

Small children are suitable candidates for the use of local anesthesia if they are well premedicated with phenobarbital to allay apprehension. The average child of two years may be given one grain of phenobarbital with safety. In case the lesion to be treated is a small lacerated wound, a cotton pledget soaked with 10 per cent benzocaine solution may be applied to the wound for five minutes. This will permit painless cleansing of the wound and surrounding skin prior to injection of procaine for anesthesia during suturing.

The Development of Specialization in Allergy

A Historical Review and a View Ahead

SAMUEL H. HURWITZ, M.D., San Francisco

ON MARCH 18, 1819, Dr. John Bostock,⁴ an English physiologist and clinician, read a paper before the Royal Medical and Chirurgical Society of London on a Case of a Periodic Affection of the Eyes and Chest, in which he presented to the members the history and clinical symptoms of a seasonal affection which had troubled him since childhood.

In January 1922, the American Association for the Study of Allergy was organized in San Francisco, and held its first meeting in June 1923. In March of the same year, an organizational meeting was held in the City of New York, which resulted in the founding of the Society for the Study of Asthma and Allied Conditions. The amalgamation of these two organizations in 1943 to form the Academy of Allergy, and the founding during the previous year of the American College of Allergists, served to bring all workers in clinical allergy together in the pursuit of a common objective.

The hundred year period from the clinical observations of Bostock to the organized efforts of many students of allergy covers the major contributions which have led to the recognition of allergy as a clinical entity and the development of specialization in study and treatment of the condition.

It was Carlyle who expressed the view that history is the essence of innumerable biographies and that anyone who wishes to know the history of any period must know the men who made it what it was. Although medical history is concerned more with ideas than with biography, the acceptance or rejection of an idea, particularly prior to the development of the experimental method, was determined in no small measure by the personality and reputation of the physician who advanced the idea. The historical development of interest in allergy as a clinical subject bears out this point.

John Elliotson, a contemporary of Bostock, in a clinical lecture delivered at St. Thomas Hospital in London on March 31, 1831,⁹ made the first definite suggestion that hay fever depends on the flower of grass and probably upon the pollen. When the lecture was delivered, Elliotson was at the height of his career as a teacher and consultant in London.

⁴Chairman's Address. Presented before the Section on Allergy at the 81st Annual Session of the California Medical Association, Los Angeles, April 27-30, 1952.

•Clinical allergy as a special field of practice is a little more than twenty-five years old. The organized efforts of the two national societies for the study of allergy and the many county, state and regional groups of physicians interested in allergic diseases have served to bring all workers in the field together in pursuit of a common objective. However, the foundation stones for the specialty were laid by a number of astute clinical observers during the past hundred years.

This historical sketch aims to portray these men and their work, and points out how the introduction of the skin test as a diagnostic method has dominated the clinical approach to allergic diseases during the past half-century—and that the technique is gradually losing some of its significance. This changing emphasis from the older diagnostic procedures to other techniques is the result of the discovery of the new hormones, cortisone and corticotropin (ACTH). These hormones have presented another method of studying the mechanism of allergic phenomena in man. Finally, brief reference is made to the growing recognition of the significance of the psychosomatic factors in the management of the allergic patient and the influence of this and the other additions to knowledge on the training of the future generations of allergists.

His great industry, acknowledged abilities and prepossessing manners made it possible for him to forge ahead in London. A year after his graduation from Cambridge in 1821, he was elected physician to St. Thomas Hospital, where he became the most energetic teacher of the day. His lectures on hay fever are of particular interest to students of allergy because Elliotson was probably the first to mention the occurrence of dermatitis of the hands following the handling of the flower of grass. In referring to this observation, he wrote: "On handling the flower of grass, her hands always became instantly inflamed; therefore there is clearly in her skin a peculiar susceptibility of irritation from the flowers

of grass." And he concluded, "I presume that the same morbid state exists in the mucous membranes."

This keen observer also anticipated by a quarter of a century Hyde Salter's classical description of hay fever and asthma following exposure to animal epidermal substances.¹³ Of a woman patient sensitive to rabbits, Elliotson wrote that proximity to rabbits "produced a running at the nose and eyes and soreness of the upper lip; that if she went into a place where there were rabbits, it came on; and that if her husband came in after having shot a rabbit and threw it down near her, those effects were instantly produced."⁹

The great error of Elliotson's life was the espousal of mesmerism. In 1843, he published a pamphlet describing "Numerous Cases of Surgical Operations Without Pain in the Mesmeric State." His wards became filled with hysterical and excitable women, who were magnetized to sleep in order to try the effects of the new remedy, the fame of which had spread far and wide. Because of these activities, Elliotson fell into disfavor and with him the original and brilliant clinical observations on hay fever which he made. Knowledge of the underlying cause of hay fever was thereby retarded by almost fifty years.

In 1873, Charles Harrison Blackley of Manchester, England, published his "Experimental Researches on the Causes and Nature of Catarrhus Aestivus (Hay Fever)," and in 1880 appeared his more complete work entitled "Hay Fever, Its Causes, Treatment and Effective Prevention." Of his own case and the circumstances which led up to his ingenious experiments on hay fever, Blackley wrote: "I have, as I have previously said, suffered from hay fever for more than twenty-five years, but the exact time at which the disorder first commenced, I cannot now remember. The attacks lasted only a few days, and then declined rapidly; and they seemed then to me, to be in some way dependent upon the commencement of warm weather."²

The well-controlled experimental observations of Blackley and the accuracy of his deductions from them are indeed remarkable when viewed in the light of present knowledge of hay fever, particularly since his work was done before the controlled experiment had come into general use in medicine. Being subject to the disease, Blackley tested on himself the pollen of nearly one hundred different species of grasses and flowers, in the fresh as well as in the dried state and also, in some instances, in the form of alcoholic extracts. Five different ways of testing the pollen were tried: "(1) by applying it to the mucous membranes of the nares; (2) by inhaling it, and thus bringing it into contact with the mucous membranes of the larynx, trachea, and bronchial tubes; (3) by applying a decoction of

the pollen to the conjunctiva; (4) by applying the fresh pollen to the tongue, lips, and fauces; (5) by inoculating the upper and lower limbs with the fresh moistened pollen."²

Thus it appears that Blackley anticipated by more than a quarter of a century the use of the diagnostic scratch and mucous membrane tests for pollen sensitivity. Of his use of the skin test, he wrote: "Whilst I was still suffering from my usual attack of hay fever, during the summer of 1865, as much pollen as could be obtained from two anthers of the *Lolium italicum* was applied to the center of the anterior surface of the forearm after the skin had been abraded, and to this the quantity of pollen named was applied after being placed on a piece of wet lint the size of the abrasion. This was covered with a piece of gutta serena, and the whole was held in position by a strip of adhesive plaster. The center of the other forearm was treated in exactly the same manner save and except that no pollen was applied to it. The scratching with the lancet raised a wheal such as is seen in urticaria or in the stinging with nettles. In a few minutes after the pollen had been applied the abraded spot began to itch intensely; the parts immediately around the abrasion began to swell, but this was apparently not due to any action on the cutis vera. In the above experiment the swelling seemed to be entirely due to effusion into the subcutaneous cellular tissues. The swelling attained its maximum in six hours, and then remained stationary for another eight hours. After this it gradually subsided, and in forty-eight hours, it had entirely disappeared. The arm to which no pollen had been applied did not exhibit any sign of swelling or irritation."²

Having established that seasonal hay fever is caused by pollen, Blackley undertook a series of experiments to find the quantity of pollen that may be floating in the atmosphere at low and high altitudes and the relationship between this quantity and the intensity of his own symptoms. After much experimenting on different methods, he decided on a procedure, of which he wrote: "Ultimately I was led to adopt a simple plan, which I afterwards found was recommended by Dr. Phoebus. This consists in the exposure of slips of glass to the open air for a given length of time, so as to allow any solid matter the air may contain to deposit upon the glass. Each slip of glass had a cell formed upon it with black varnish, so as to enclose a space one centimeter square. This square was coated with a thin layer of fluid prepared for this purpose. [In a footnote he stated that the fluid was made by mixing one part of water, two of proof spirit and one part of glycerine.] After being exposed for twenty-four hours, each slip was placed under the microscope,

and any deposit it contained was carefully examined, and the number of pollen grains counted."²

Other observations were made by attaching the glass slide to a kite which was flown at elevations of from 500 to 1500 feet. The pollenometric charts made by Blackley in 1866, 1867, and 1869 differ in no essentials from those of today.

In 1925, a half century later, Dr. William Schep-
pergrell of New Orleans, a pioneer student of hay fever, confirmed Blackley's observations on the pollen content of the upper strata by exposing pollen plates in an airplane at elevations over ten thousand feet¹⁴—studies which have led to the classical aerobiologic observations of O. C. Durham during recent years.

In his lifetime, Blackley, like many pioneers, was looked upon as somewhat of a faddist, and the fact that he practiced homeopathy caused his contemporaries to overlook his brilliant contribution to knowledge of the clinical aspects of allergy, thus again retarding development in this field by almost half a century.

The first noteworthy American contribution to knowledge of hay fever was made by Morrill Wyman of Cambridge, Massachusetts. With some members of his family he had been a lifelong sufferer of an autumnal form of the disease. In 1854, Wyman described the disease in his lectures at the Medical School of Harvard University, where he served for many years as Hersey Professor of the Theory and Practice of Medicine, a title which is still held by present incumbents of this position. In 1872, he published an exhaustive monograph on Autumnal Catarrh, the earliest contribution in the literature on ragweed hay fever. Of his experiment with ragweed, Wyman wrote: "Early in September 1870, I gathered in my grounds at Cambridge, Massachusetts, some Roman wormwood (*Ambrosia artemisiæfolia*) in full flower, covered with pollen, taking the whole plant, stalks and roots. This was carried to the White Mountain Glen, about 1,200 feet above tide, where we remained till September 23 in the afternoon. The parcel containing it was then opened and freely sniffed by myself and son. We were both seized with sneezing and itching of the nose, eyes, and throat, with a limpid discharge. My nostrils were stuffed and my uvula swollen, without cough, but with the other symptoms of autumnal catarrh. These troubles continued through the night, and did not disappear till the afternoon following. Professor Jeffries Wyman (Professor of Anatomy in Harvard University), who was of the same party, but did not sniff the plant, had none of the symptoms just described."¹⁸

That pollen was an etiologic factor in hay fever, as was so ably established by the experiments of

Blackley and Wyman, was by no means generally accepted in Europe and the United States, despite the established position of Wyman and the high regard in which he was held by his contemporaries. The reports by Blackley and Wyman were published at the beginning of the bacteriologic era—at a time when, owing to the influence of the researches of Pasteur and Koch, hay fever began to be considered an infectious disease. This theory found many adherents, although not one of Koch's postulates had been fulfilled in any of the experiments described.

In 1876, another monograph on hay fever appeared. It was written by Dr. George M. Beard, a well-known neurologist of New York City, a fellow of the New York Academy of Neurology and of the American Neurological Association. Beard, although well acquainted with the experimental researches of Blackley and Wyman, nevertheless concluded that the whole question of the origin and nature of hay fever was as yet an open one. He advanced the view that the disease, as well as the asthma which is frequently a complication, is essentially a neurosis—a concept of some importance in view of the stress placed in recent years on the psychogenic aspect of allergic manifestations. Owing to the great influence of Beard's writings on his contemporaries, more than a quarter of a century was to elapse before the significance of Blackley's and Wyman's work was fully appreciated.

VON PIRQUET AND THE FOLLOWING HALF-CENTURY

No historical review of the beginning of the present clinical concept of allergic manifestations would be complete without a brief sketch of the introduction of the skin test, which has so dominated the clinical approach to allergic diseases during the past fifty years. In 1906, Clemens von Pirquet, professor of pediatrics at the University of Vienna, who had acquired an international reputation for his classical work on serum disease, vaccination, and tuberculosis, suggested the term *allergy* for the changed reactivity of the organism following the repeated introduction of pathogenic substances. These studies led to the development of the tuberculin test, which was not only a new diagnostic method for the study of tuberculosis in childhood, but paved the way for the study of the pathogenesis of many other diseases and particularly those of allergic origin.

In 1909, the von Pirquet scarification technique was used by Henry Lee Smith¹⁷ in the study of a patient sensitive to buckwheat, which he published under the title, "Buckwheat-Poisoning." When Smith reported this case at a meeting of the Johns Hopkins Medical Society, those who were students in the Johns Hopkins Medical School at the time (the author among them) little realized that this case

report opened a new approach to the diagnosis of allergic diseases. Smith not only obtained a positive reaction to a scratch test with buckwheat but produced a constitutional reaction in the patient. Dr. William S. Thayer, clinical professor of medicine at Johns Hopkins at that time, who suggested the test, Dr. Rufus Cole, later director of the Rockefeller Hospital, and Dr. Smith served as controls. In them the application of buckwheat to the scarified skin gave negative results.

The skin test as employed by Smith soon stimulated many other similar studies in this country. In fact, it may be claimed that the skin test as a diagnostic procedure in allergic diseases is essentially an American contribution.

In 1912, O. M. Schloss¹⁵ used the cutaneous test in his studies on children sensitive to common foods, and a year later Clowes⁶ obtained positive skin reactions in ragweed-sensitive patients. This pioneer work was followed by the studies of Goodale¹⁰ who tested asthmatic persons who were sensitive not only to pollens but to horse dander; and Goodale's observations stimulated the extensive research on asthma carried out by I. Chandler Walker at the Peter Bent Brigham Hospital in Boston. Walker used the cutaneous test for the diagnostic recognition of a wide variety of allergic conditions owing to sensitivity to inhalants, foods and other allergens.

Other methods of testing for sensitivity soon were suggested. Smith had thought of testing buckwheat-sensitive patients by the conjunctival route, but at the suggestion of Thayer the cutaneous test was substituted. And Goodale was among the first to obtain mucous membrane reactions by the direct application of pollen extracts. Intracutaneous testing had been used by W. L. Moss at the Johns Hopkins Hospital preliminary to the administration of therapeutic sera, but the first employment of the intracutaneous technique in general allergic diagnosis is usually credited to Robert A. Cooke of New York City.

In 1911, Leonard Noon, working in Sir Almroth Wright's laboratory at St. Mary's Hospital in London, published a paper in the *Lancet* entitled, "Prophylactic Inoculation Against Hay Fever."¹² Noon, who died when but thirty-five years of age, had already achieved a reputation for his researches on tetanus toxin and antitoxin and other contributions to immunology, but it is for his pioneer work on the treatment of hay fever that he is best known to students of allergy. His name will continue in bright usage so long as the Noon unit for measuring pollen dosage remains the most practical method of measurement. It is of historical interest, however, that Karl Koessler, working at the Sprague Institute in Chicago, had anticipated Noon's work. In an article

on "The Specific Treatment of Hay Fever (Pollen Disease)," published in Forchheimer's *Therapeutics of Internal Diseases*, Koessler wrote: "In May 1910, unaware of the work on this subject done in A. E. Wright's laboratory, I began active immunization against hay fever, and thus far I have treated forty-one patients by this method."¹¹

Stimulated by the work of Noon which was later continued by John Freeman of London and Koessler in this country, numerous botanical surveys of hay fever producing plants were begun and extended to almost every region of the United States. Among the earliest of these surveys, and one of particular interest to students of allergy in California, was one carried out by Harvey M. Hall, formerly of the Department of Botany, University of California, and published in the *Public Health Reports* of the U. S. Public Health Service in 1922. This work was stimulated by the late Dr. Grant Selfridge, a San Francisco otolaryngologist, who in 1918 published one of the earliest reports in California on pollen desensitization.¹⁶ Those who knew Dr. Selfridge, the author included, were impressed by his scientific curiosity, particularly since his training was essentially that of a surgical specialist.

With the publication of the successful therapeutic results in hay fever, the development of clinical applications of the accumulating lore of allergy proceeded at a great pace and many other allergic manifestations were treated by similar methods.

A. F. Coca and Robert A. Cooke contributed much to knowledge of the immune mechanism underlying allergic phenomena and the control of allergic disease by desensitization or, as they preferred to designate it, hyposensitization. Their studies, as well as those of W. W. Duke of Kansas City and Warren T. Vaughan of Richmond, Virginia, were among the first to stress the role played by other allergenic substances than pollen as a cause of allergic manifestations. Duke was the author of the first complete textbook on allergy published in this country.⁸ The first edition appeared in 1925 under the title "Allergy, Asthma, Hay Fever, Urticaria and Allied Manifestations" and contained observations on the importance of foods, drugs and physical agents in allergic diseases. To Vaughan¹⁹ clinical allergists are indebted for many pioneer investigations on other allergic conditions, such as migraine, and for his botanical classification of foods. His concept of allergic equilibrium has helped to explain some puzzling problems in the interpretation of symptoms of allergic origin.

Noon referred to his method of treatment as "prophylactic inoculation," and Koessler used the terms "specific treatment" and "active immunization." Despite the intensive research on the mech-

anism of desensitization during the past twenty-five years begun by Coca and Cooke, and since then extended by a host of workers, there is as yet no acceptable explanation of the mechanism underlying the allergic reaction and its control. The concept suggested by Dale and Laidlaw⁷ in 1910, that histamine may be a participating factor in anaphylaxis, was soon used to explain the basis of allergic manifestations in man, a view which was greatly strengthened by the observations of Duke in 1923 and 1924 on urticaria caused by physical agents. The concept of allergy due to physical agents suggested by him has led to many investigations on the role of excessive histamine formation as a cause of allergic phenomena. These studies have stimulated investigations on many therapeutic methods designed to control excessive histamine release in the tissues of allergic persons. However, neither the use of histaminase, the anti-enzyme of histamine, nor desensitization against histamine has proved effective.

Whereas the introduction of the hormones, cortisone and corticotropin (ACTH) have dwarfed the many advances in the drug therapy of allergic diseases made during the past twenty-five years, no historical sketch would be complete without brief mention of other drugs which have been found helpful. Epinephrine, first isolated by Takamine in 1901 and later by Abel of Johns Hopkins, has been since its first use in asthma during the first decade of this century one of the most potent weapons. And when the experimental work of Chen⁵ and co-workers in 1926 proved the value in bronchial asthma of the alkaloid, ephedrine, isolated from a Chinese plant, Ma Huang, by Nagai in 1887, search was stimulated for other sympathomimetic drugs and the search has continued to the present day.

About a decade ago, another drug was added to the therapeutic armamentarium. Although Askanazy, as early as 1895, found that the salt of theophyllin produced beneficial effects in angina pectoris, its usefulness in combination with ethylene diamine, as aminophylline, was not fully recognized until the year 1940.

The addition of two other groups of useful drugs in the management of allergic patients is so recent as to require only brief mention. Their future place in the treatment of allergic diseases must await the verdict of more research and clinical experience. The antihistamine drugs have already proved to be valuable agents in the symptomatic management of patients with allergic disease, and the introduction of the antibiotics has served as a powerful weapon to combat the secondary infections of the respiratory tract that so frequently complicate allergic diseases.

No discovery, however, has so shaken the foundations of present-day ideas of the basic mechanism

of allergic phenomena as the research, during the past several years, on the part played by the pituitary and adrenal glands in human hypersensitiveness. A historical sketch is not the place for a discussion of the role of the corticosteroids in the therapy of allergic diseases. Probably the greatest significance of the introduction of cortisone and corticotropin, remarkable as their effects may be on patients with allergic disease, lies not so much in the therapeutic results achieved as in the stimulus to basic research on the immunochemical mechanisms underlying allergic phenomena and on ways of modifying or perhaps of bringing about profound changes in the allergic constitution and in the adaptive processes so brilliantly postulated by Hans Selye.

There is another straw in the wind, which would appear to indicate that the care of allergic patients is fast passing beyond the period of technicology. The breeze seems to blow toward the ever-increasing appreciation by physicians of the vital part played by psychogenic factors in allergic diseases. Whereas the importance of these factors in such chronic ailments as hypertension, diabetes, peptic ulcer and many other chronic conditions has been fully recognized, little emphasis has been placed on the psychiatric management of patients with allergic disease. Many contributions to the literature on this phase of therapy have appeared in recent years, but considerable resistance has been shown by allergists to the adoption of psychotherapeutic methods. This aversion may owe (as Ross and Wilson pointed out in their chapter on Psychotherapy in Bronchial Asthma, published in Abramson's text on the Somatic and Psychiatric Treatment of Asthma¹) to overemphasis placed by allergists on organic factors, and by psychiatrists on psychogenic factors. It is probable that either of these factors alone or both synergistically can act as trigger mechanisms in giving rise to allergic manifestations. In some instances symptoms may result from allergic causes alone, in others from psychogenic factors, but perhaps in the majority of instances both allergic and psychogenic mechanisms serve to bring about and prolong allergic manifestations. It would appear, therefore, that allergists of the future will need to devote more time to the psychotherapeutic as well as to organic factors in the management of patients.

Furthermore, the training of the next generation of physicians specializing in allergy will be influenced, in no small measure, by the ever-expanding horizons which in recent years have removed diagnosis and treatment of allergic disease from its limited technological confines. This trend will of necessity greatly influence not only the kind of undergraduate instruction in allergic diseases given in medical schools but also the planning of post-

graduate teaching. The postgraduate instructional courses on the many facets of allergy presented both by the American Academy of Allergy and the American College of Allergists fill a great need, and these organizations are to be commended for the vigor with which they have carried out this part of their program. However, there still remains some difference of opinion as to how instruction in allergy should be planned on the undergraduate level, and under whose aegis certification of the allergists should be placed.

It is common knowledge that undergraduate instruction in allergy in medical schools has lagged in spite of the fact that allergic phenomena constitute an essential part of the basic sciences of immunology, bacteriology, physiology, pathology, pharmacology, endocrinology and immunochemistry. Those who have had the responsibility of teaching medical students the fundamentals of allergy have been impressed with the immensity of the task of presenting adequately a subject which has such wide ramifications. It has become the conviction of many teachers of this subject that undergraduate instruction in allergy can be given most effectively as part of the teaching of the individual basic science. Thus a course in immunology or immunochemistry should include a discussion of sensitization in experimental animals and in man, and the fundamentals of the mechanism involved both in anaphylaxis as well as in human hypersensitiveness. The physiologist and pathologist could devote some time to the physiologic and pathologic aspects of the allergic reaction, and the pharmacologist to an evaluation of the common sympathomimetic drugs, antihistamines and the newer hormones, in the drug therapy of allergic diseases.

In brief, undergraduate teaching in allergy should be made a part of the instruction in the basic medical sciences. These basic facts and theories can then be coordinated with the common clinical manifestations of allergy such as hay fever, asthma, eczema, urticaria, gastrointestinal distress and allergic reaction to drugs. This integration of the subject can best be carried out in the out-patient allergy clinic by a member of the clinical staff adequately trained in this branch of internal medicine. Such a plan would lessen the trend, now so prevalent, toward overburdening the medical curriculum with instruction in the subspecialties. It must be admitted, however, that this is contrary to the program of the American Academy of Allergy and the American College of Allergists. Both of these organizations are on record as sponsoring undergraduate lecture courses in this specialty.

Closely related to the problem of undergraduate and graduate instruction in allergy is that of certifi-

cation. In 1948, a joint committee representing the American Academy of Allergy and the American College of Allergists adopted a resolution²⁰ recommending the establishment of an independent or autonomous board. It is the conviction of many, however, that certification in allergy should continue to be the function of the boards of Internal Medicine and Pediatrics. The creation of an independent board might stunt rather than advance progress in knowledge of allergy, because it would deprive this subspecialty of the sustenance from the mother trunk upon which its growth must depend, and without which the dependent branches would undergo gradual atrophy.

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What is New in Adoption

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DURING the last three or four years there has been a significant increase in the number of adoption agencies in California and consequently in the amount of agency adoption services. In 1947-48 when the new law authorizing public as well as private adoption agencies went into effect, only one out of every seven children was being placed by the agencies. The remainder were placed through other sources. By last year almost one out of four children was placed through agencies—an indication that people will turn to agencies when services are available to them. At the end of January 1952, 1,100 children under care of adoption agencies in California were in their adoptive homes awaiting completion of adoption and another 1,300 children were being studied for placement. As the newer agencies get into full swing, greater coverage will be possible and the percentage of agency adoptions can be expected to continue to increase.

In many areas throughout California interested citizens and agencies are reexamining the present adoption program in order to provide better coverage and make changes to otherwise provide improvements in service. More than two years ago through the generosity of the Columbia Foundation and the Rosenberg Foundation a sum of money was assigned to activate and organize the Citizens' Committee on Adoption of Children in California.

This committee, a statewide organization, and county citizens' committees in 12 counties throughout California were organized to determine what the citizens of the state consider to be and will accept as a sound adoption program. In order to answer this question, the committees have considered all the facts, criticisms and differences of opinion relating to existing adoption practices and on this basis have come up with a summary and recommendations. This has already accomplished a great deal of good in clearing the atmosphere and in providing a better working relationship between the adoption agencies and the various professional groups interested in one way or another in adoption.

The agencies also are taking steps to examine their own programs to see what changes can be made. California adoption agencies meet periodically to exchange points of view, share experiences and plan

• Adoptions arranged through adoption agencies are on the increase because there are more agencies. The Citizens Committee on Adoption of Children in California has concluded that there are very few adoptable children under care in orphanages. Fifty per cent of physicians would prefer agency adoptions, but only 24 per cent actually refer both expectant mothers needing such services and couples wishing to adopt infants to such agencies. The program in this field of social welfare should be child-centered and physicians should seek and give cooperation to such agencies.

programs designed to attain uniform standards and practices including more effective relationships with physicians and others in the community.

Following is a review of the current findings and criticisms of adoptions of children in California.

1. The supply does not meet the demand. For every baby available for adoption there are ten couples who want to adopt babies. A statement frequently made was that orphanages and foster boarding homes were filled with babies available for adoption. The Los Angeles County Committee conducted a study of all children under care in institutions and boarding homes, private and public. It was found that of 3,394 children under the age of 17 years whose cases were studied, only 105 were orphans in fact. Of 2,032 living in foster homes, 29 per cent were there because their homes were undesirable, 24 per cent because of the illness of a parent, and 16 per cent because the mother was employed.

Further analysis revealed 416 children who were rarely or never contacted by parents or relatives and who were therefore possibly adoptable, with difficulty. Two hundred twenty-nine of them were more than 12 years of age. Adoption agencies had started plans for adoption of 80 of the 187 who were less than 12 years old. It seems reasonable to conclude, therefore, that there is not, in fact, a number of adoptable children supposedly being "hidden out" in institutions.

2. Real progress is being made in attempts to determine why many adoptions are arranged individually and privately without the services of a licensed adoption agency. The most frequent criti-

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cisms are of "red tape," long delay and overemphasis on meticulous matching of child to foster parent. As to the "red tape," it must be said in defense of agencies that they are child-centered. They attempt to perform a service of high quality, and with limited funds they have difficulty in moving rapidly in home selection and placement. Placement methods have recently been changed to permit the earliest possible placing of numbers of infants within a few days to a few weeks after birth. A real effort is being made to place children with minor handicaps, physical or mental, and children handicapped by background. No longer does a social worker consider only a perfect child eligible for adoption.

3. Probably the greatest contribution to the field of adoption by the Citizens' Committee on Adoption has been a survey of the position of physicians in this social welfare problem. It has sometimes been said that social workers have not received or given cooperation in this phase of welfare planning. The evidence indicates that 50 per cent of physicians preferred agency adoptions, but only 24 per cent actually referred to social agencies both the expectant mothers with social problems and couples seeking to adopt children. Thus, three-fourths of the physicians interviewed arranged for placement of babies directly with foster parents in order to satisfy their own patients. In so doing they centered their consideration on the adoptive parents and not on the baby. Obviously there is urgent need for continued discussion in the hope that physicians and social workers may resolve their differences by close cooperation.

4. The problem of difficult-to-place children of minority groups, from the viewpoint of race and color, is being studied by the Los Angeles County Adoption Agency and considerable progress has

been made in this direction. The Children's Home Society of California, the only statewide privately-supported adoption agency, is also working with this group.

5. Assistance to unmarried mothers is vitally needed. In the state of Washington the Children's Home Society has set up a program for the care of unwed mothers during pregnancy, delivery and the postpartum period. Physicians and hospitals are cooperating by rendering this service at a minimum fee. In California a similar project has just begun. This will be most important since, with this service available, there will be less reason for the so-called exchange arrangement in which care for the patient and the baby may be arranged by a third party.

6. Finances have limited the work of private as well as public agencies. The number of agencies charging fees has doubled in the last few years. One agency in California finances its program entirely through fees. The principle of a fee has even been written into law which established the county adoption agencies in California. It is expected that greater emphasis will be placed on this in the future. However, there are still differences of opinion as to whether or not the fee should be on a sliding scale based on ability to pay, or should be standard and sufficient to cover the cost of services rendered to the prospective adoptive parents, or sufficient to cover also part or all of the cost of service to the child and the natural parents.

It is recognized that the medical profession has a community responsibility as well as an ethical one. As such, it must take an active part, seek and give cooperation with the social welfare group. The adoption program must be child-centered, and the medical profession's aim should be to find the best homes for children—not just children for patients.

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Hyperinsulinism and Neuromuscular Disorders

A Consideration of the Association of Pancreatic Adenoma with Wasting States

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NEUROMUSCULAR DISORDERS belong to a clinical group in which the cardinal signs and symptoms are related to progressive wasting of muscles. As a group these disorders are etiologically vague and pathogenically unspecific. The broader classification of neuromuscular disorders includes those states characterized by some demonstrable alterations in the anterior horn cells, or in their peripheral processes, or by some alteration in structure in the muscle fibers, per se. The term *progressive muscular atrophy*, or the alternative term *progressive spinal (or nuclear) muscular atrophy*, is usually employed to designate that group of muscle-wasting states in which the anterior horn cells are the site of demonstrable alteration (amyotrophy). Phenomena in progressive muscular atrophy, therefore, are progressive wasting of muscles, muscle fasciculations, increased myotatic irritability, electromyographic evidence of fibrillation, and progressive motor weakness, involving chiefly the truncal and appendicular muscles. In the most classical form of this disorder there is an inevitable progression of the wasting of muscles to the point of almost complete motor disability, bedridden status, and death.

Since knowledge of this disorder, as of other progressive muscle-wasting states, is meager, every clue as to etiologic or pathogenic factors seems worthy of pursuit. No clue has as yet been obtained, for example, as to the character of any toxic, viral, chemical, genetic, metabolic, or deficiency factors which presumably might be causative. Recently, however, implication that disordered endocrine function plays a part in progressive muscle-wasting states has become increasingly impressive as more and more clinical observations have been recorded.²⁻⁶

There seems sufficient reason, therefore, for reporting here in brief the study of a case of progressive muscle wasting in which an endocrine factor seemed responsible. In this case, there was a generalized progressive wasting of muscle, muscle fasciculations, electromyographic evidence of muscle fibrillation, increased myotatic irritability, and progressive

• *Five cases, one reported herein, have been described in which progressive generalized muscle wasting, muscle fasciculations, increased myotatic irritability, and progressive motor disability were in evidence. In all of these cases, a pancreatic islet cell adenoma was present. In four of them arrest of the symptoms of muscular disease followed upon surgical removal of the islet cell adenoma. In the other case the tumor was not observed until postmortem examination, and in that case there was also histologic evidence of widespread and severe degeneration in the anterior horn cells of the spinal cord.*

The observations give rise to conjecture upon the possibility that endocrine dysfunction plays a part in the genesis of progressive muscular atrophy.

motor disability. Perhaps of greater importance is that this presumably inexorable progression of muscle atrophy was arrested following the surgical removal of a tumor of the pancreas, histologically confirmed as an islet cell adenoma.

It is noteworthy that the literature contains reports of four other cases of this kind, all published since 1946. In three of the previously reported cases, removal of a pancreatic adenoma brought about an arrest of the signs relating to progressive wasting of muscles; and in the fourth case, in which a pancreatic adenoma was not discovered until autopsy, there was microscopic evidence of an associated severe and widespread degeneration of anterior horn cells of the spinal cord (amyotrophy).

REVIEW OF LITERATURE

Silfverskiöld in 1946⁵ reported upon two male patients, one 17 years and the other 34 years of age, who had progressive generalized wasting of muscles, muscle fasciculation, electromyographic evidence of fibrillation, increased myotatic irritability, and progressive motor disability associated with a pancreatic adenoma. In each case the progression of clinical signs was arrested by surgical removal of

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the tumor, histologically verified as an adenoma of islet cell type.

Lidz and co-workers² in 1949 reported the case of a 23-year-old man in whom there was arrest in the signs and symptoms of progressive wasting of muscles, muscle fasciculations, increased myotatic irritability, and progressive motor disability after a pancreatic islet cell tumor was removed. There were no sensory abnormalities noted and no other neurologic abnormalities.

Tom and Richardson⁷ reported a case in which at postmortem examination of a 33-year-old woman who had had progressive generalized muscle wasting, not only was an islet cell tumor found, but severe and widespread degeneration of the ventral horn cells of the spinal cord (amyotrophy) was observed histologically.

REPORT OF A CASE

A 42-year-old white man, a salesman, was first observed in November 1950 with complaint of progressive weakness and wasting of the muscles and of a "quivering" feeling in the muscles for about one month. During the preceding week the patient had noted especial difficulties in climbing stairs, in walking more than a short distance, and in buttoning a shirt, holding a pencil, using a knife and fork. In the previous few days he had begun to note that his feet tended to "slap" after he had walked any considerable distance.

Upon inquiry the patient said that for the previous year he had been noting increasingly frequent transient attacks of weakness, associated with tremulousness, mild disorientation and confusion, "blurring" of vision and diplopia, most often on awakening in the morning or just before breakfast. He had found that taking food relieved the attacks, and eventually he drank sweetened orange juice for amelioration of symptoms. Several months after the onset of these attacks he consulted a physician who made a diagnosis of hyperinsulinism. At that time the content of sugar in the blood, repeatedly determined, was subnormal (30 to 40 mg. per 100 cc.). Pancreatic adenoma was suspected and laparotomy was carried out. The suspicion was not confirmed but approximately two-thirds of the tail of the pancreas was resected. The previously described attacks continued and within a month after the operation the patient noted the signs and symptoms of progressive muscle wasting.

At the time of examination by the author, approximately one month later, there was diffuse atrophy of moderate degree of the appendicular and truncal musculature, generalized muscle fasciculation, increased myotatic irritability, and electromyographic evidence of fibrillation. Walking was difficult and of the "steppage" type. Hand grasps were weak. Rising to a sitting or standing position was difficult. All deep reflexes were intact and hyperactive, except the Achilles reflexes, which were diminished. No sensory abnormalities were noted. All other neurologic findings were within normal limits.

During the next few weeks the patient continued to have transient early morning attacks associated with hypoglycemia (the sugar content of the blood was 6 mg., 15 mg. and 18 mg. per 100 cc. on three occasions). Muscle wasting and muscle fasciculation continued and motor disability increased. Surgical consultants concurred in a diagnosis of hyperinsulinism and recommended reexploration for possible pancreatic adenoma. In February 1951, four months after the onset of progressive muscle wasting, a pancreatic ade-

noma 2 cm. in diameter was removed from the inferoposterior surface of the head of the pancreas. It was histologically identified as an islet cell tumor.

No further early morning attacks or hypoglycemia were noted, and muscle wasting and motor disability were arrested. In the course of several weeks, with the aid of physiotherapy, the patient regained considerable motor capacity. Seven months after removal of the pancreatic adenoma, he was able to grasp a pencil, to write, to button his shirt, and to walk approximately a mile without tiring. He had regained nine pounds of weight lost during the illness.

DISCUSSION

The pathogenesis of the clinical entity commonly referred to as "progressive muscular atrophy" remains obscure. Duchenne (in 1848) and Aran (in 1850) expressed belief that the disease is of muscular (myogenic) rather than of neural (neurogenic) origin. In 1853 Cruveilhier reported that in such cases he had noted a slimness of the anterior roots of the spinal cord, and thus attention was focused on the possibility that progressive muscular atrophy was neurogenic; and in 1860 Luys reported that degenerative changes were observed in the anterior horns of the spinal cord at postmortem study of patients who had the disease. Within the next decade or two the work of Leyden (1876), Landouzy (1885), Dejerine (1885), and Erb (1891), served to bring about a clear distinction between progressive muscle atrophy related to anterior horn cell alteration (neurogenic) and muscle dystrophy associated with alterations in the muscle fibers, *per se* (myogenic). Since that time, although anterior horn cell alteration is a *sine qua non* of progressive muscular atrophy, the cause of anterior horn cell dissolution remains obscure.

It is well to consider, therefore, the possibility that disordered endocrine function plays a part in the disease clinically characterized by progressive wasting of muscles, muscle fasciculations, electromyographic evidence of fibrillation, increased myotatic irritability, and progressive motor disability.

The clinical features in all of the five cases reviewed herein were identical. In all of them the symptoms were associated with the existence of a pancreatic islet cell tumor.

The evidence is strong in support of a hypothesis that at least in some cases of progressive muscular atrophy, abnormality of endocrine function may bring about the *sine qua non* of this disorder—anterior horn cell dissolution (amyotrophy). And it gives rise to conjecture that either in the islet cells or in some remote endocrine gland (such as anterior pituitary, thyroid or adrenals) there might be sufficient hormonal imbalance or altered hormonal function to result ultimately in anterior horn cell dissolution. The well known hormonal antagonisms which exist between the islet cell hormone (or hormones) and those of the anterior pituitary (Houssay¹) and

the physiologic interdependence of these and other hormone-producing organs needs no emphasis. As to the five cases reviewed here, there can be little doubt of endocrinic pathogenesis; in all of them the clinical features conformed to those of "progressive muscular atrophy" except that the progress was arrested by removal of an islet cell tumor. Further study is needed to determine to what extent pituitary-islet cell, pituitary-adrenal-gonadal, or pituitary-thyroidal, or other endocrine system dysfunctioning is of etiologic significance in progressive muscle-wasting states (amyotrophy).

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Stress Incontinence of Urine

A Consideration of Etiologic Factors in Women

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URINARY STRESS INCONTINENCE, not an uncommon symptom, plays a large and distressing role in the daily lives of many women. Varying explanations for the lack of continence have been advanced, and there is no unanimity of opinion concerning the exact nature of the defect. A most disturbing aspect of the problem is that, in most series, measures taken to correct the condition are seldom successful in more than 85 per cent of patients. Any method of treatment which leaves one out of eight to nine patients no better off than before invites careful review and evaluation. A logical approach to consideration of the nature of stress incontinence should be to study normal continence and specific variations which accompany the defect.

NATURE OF THE DEFECT

Recent reports by Muellner,²⁰ Millin and Read,¹⁷ and Marchetti¹⁴ showed quite lucidly that normal urinary continence is associated with adequate support of the bladder neck. Using methods of fluoroscopic observation and cystography, they demonstrated that in continent primiparae the bladder has a smooth outline (Figure 1) with its base just above the symphysis pubis. When the subject is standing, coughing or straining the bladder maintains its regular outline across the base, while when the subject is voiding the bladder base descends in such a way that the region of the sphincter becomes the most dependent portion of the bladder and assumes a pointed appearance (Figure 2). It is felt that this descent of the internal sphincter opens it slightly and allows urine to enter the proximal urethra, which is followed by a reflex contraction of the detrusor muscle, and micturition ensues. When voiding is voluntarily stopped, the neck of the bladder is pulled up to a level slightly higher than it was originally, the bladder base becomes horizontal, the detrusor relaxes, and the urinary stream is shut off. The same situation holds with continent multiparae, except that the bladder base sinks to a lower level on standing or straining. However, the regular horizon-

• Urinary continence in women is intimately associated with adequate support of the neck of the bladder. Any increase in tone of the bladder musculature, or in the intravesicular pressure, substantially increases the liability to incontinence. Obstetrical trauma may cause stress incontinence by disrupting supports of the neck of the bladder and by stretching the fascial structures of the posterior portion of the neck of the bladder. Minor injury not grossly demonstrable may occur in this way and upset the very delicate balance existing between the forces of the detrusor muscle and the resistance of the urethrovesical junction.

In correcting the defects associated with stress incontinence, there are specific indications for various methods—active exercise, plastic reconstruction of the bladder and urethral supports, and the various operations for suspension of the neck of the bladder.

tal outline of the bladder base is maintained until voiding is initiated.

Anatomically it is quite apparent that the region of the neck of the bladder (or internal urethral orifice) is closely supported by the pubocervical portion of the endopelvic fascia, by the pubococcygeus portion of the levator ani, and to a degree by the deep transverse perineal muscles.⁷ From the position of these muscles it is seen that one of their functions would be to raise and to allow lowering of the bladder neck, thus playing an active role in the voluntary initiation and cessation of voiding. They would also resist any sharp increase in intra-abdominal or intravesical pressure and thereby protect the internal urethral sphincter against stress.

It has been observed cystographically that when a woman with urinary incontinence reclines, the bladder base assumes a normal position and outline (Figure 3). When she assumes the erect position, even without straining, the bladder base takes on a pointed shape and the region of the internal sphincter becomes the most dependent part of the bladder (Figure 4). It then takes only a minimal descent to open the internal sphincter and allow urine to escape.

The factor of pressure relationships within the

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Figure 1.—Diagram of bladder in nullipara. Note good support and even outline of the bladder base. (After Muellner.)



Figure 3.—Incontinent multipara reclining. Note regular outline of the bladder base. (After Muellner.)



Figure 2.—Nullipara. Note appearance of the bladder base and descent of the internal urethral orifice with voluntary attempt to void. (After Muellner.)

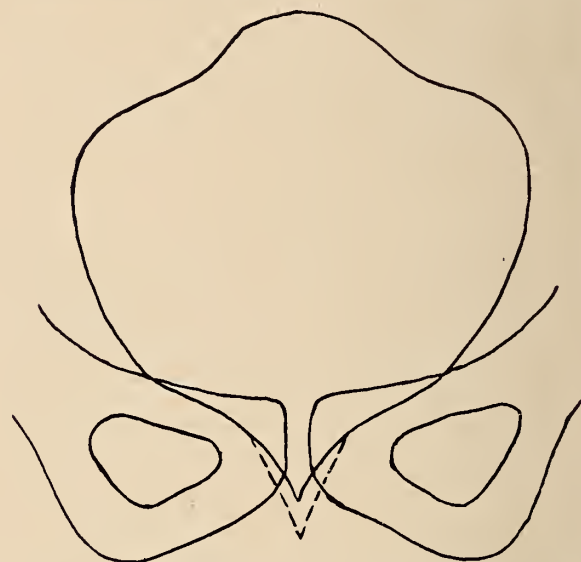


Figure 4.—Incontinent multipara standing. Note the pointing of bladder base and descent of the internal urethral orifice. The dotted line indicates the minimal additional descent necessary to initiate voiding. (After Muellner.)

bladder is also important in considering continence. With the bladder at rest, the intravesical pressure is usually measured between 0 and 15 centimeters of water.⁶ During the course of active micturition, the pressure rapidly builds up to 50 to 100 centimeters of water until the detrusor muscle relaxes. It is logical that with the vesical neck or internal sphincter so constructed that it must counteract only a very low pressure when the detrusor muscle is relaxed, any increase in the resting tone of the bladder musculature would substantially increase the chances of incontinence. That this is true is shown by the in-

creased incidence of incontinence usually found in association with such conditions as descensus uteri, pregnancy in the third trimester, and large pelvic tumors—conditions that are also known to be associated with increased intravesical pressure.^{2, 7} In this regard, reflex irritability of the detrusor from ureteral stricture, or from trigonitis, might easily overcome the resistance of the sphincter.^{7, 22} Consequently, in investigation to trace etiologic delineations of stress incontinence, cystometric studies to estimate the balance of the detrusor against the internal sphincter are considered useful.

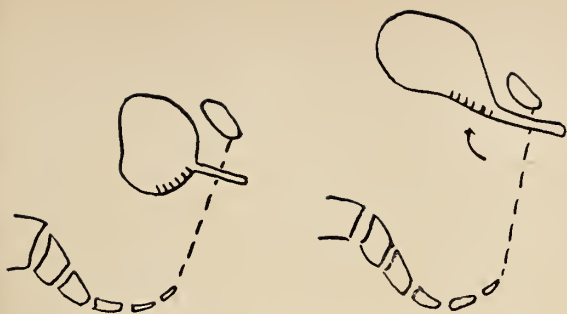


Figure 5.—*Left*, position and relationship of urethra and urinary bladder in pregnancy before engagement of the fetal head. *Right*, note compression of the urethra against the symphysis, and rotation of the base of the bladder into line with the urethra, both occurring with deep engagement of the head in labor.

ETIOLOGIC FACTORS

The nature of the trauma usually responsible for stress incontinence has been the subject of considerable debate. The condition is generally ascribed to trauma of the urethral sphincter resulting from childbirth. Some investigators attribute it to adhesions around the urethra which distort the sphincter and impair its function,¹¹ while others ascribe it to obstetrical injury of the supports of the bladder. Still another view is one of serious doubt as to whether obstetrical trauma is responsible.¹⁹

In an effort to evaluate this problem of obstetrical trauma in the causation of incontinence Malpas, Jeffcoate, and Lister¹³ carefully studied the bladder and urethra by cystographic methods in various stages of labor. They demonstrated quite well that the neck of the bladder did not rise during labor but instead came to occupy a position closer to the symphysis. Also they found that the urethra did not elongate during labor but appeared to do so because the bladder base rotated (with the internal urethral orifice remaining stationary as a pivot) in such a way that the urethra and bladder base came to lie in the same straight line, making it difficult to indicate where bladder ended and urethra began (Figure 5). They were unable to show any relationship between the formation of a lower uterine segment and the position of the bladder as a whole; throughout labor the position of the urethrovesical junction and the bladder base remained unchanged. From this they would surmise that an extreme rotation of the bladder base from its normal horizontal position to the vertical position stretches the fascial investments of the bladder base and, more specifically, those of the posterior aspect of the bladder neck. After delivery, they postulated, the fascia does not recover its strength and the normal perpendicular relationship of the urethra to the bladder is lost. They expressed belief that minor injury, not grossly demonstrable,

may occur in this way and upset the very delicate balance existing between the force of the detrusor muscle and the resistance at the urethrovesical junction.

Kennedy¹¹ attached considerable importance to the internal sphincter and stated that its action is augmented in large part by the voluntary action of the anterior portions of the levator muscles. He felt that, for the sphincter to function properly, it must be circular in configuration and free of adhesions. The trauma of childbirth, he believed, often injures the neck of the bladder, therewith producing adhesions about the sphincter and disrupting its fibers. Other investigators tend to doubt the existence of a sphincter as such, believing as do Denny-Brown and Robertson⁶ that the internal sphincter is an integral part of the detrusor muscle. These investigators demonstrated that no relaxation of the sphincter may occur without a corresponding contraction of the detrusor muscle.

Muellner¹⁹ was impressed by the fact that when signs of relaxation are discernible, there is no correlation between the extent of relaxation and the degree of incontinence. He was impressed, too, by the observation that pronounced stress incontinence occasionally occurs even though the pelvic supports are intact, and conversely by the maintenance of satisfactory continence in the presence of obviously poor bladder and urethral supports. Also, Jones and Kegel found that they could not predict which patient had stress incontinence and which did not when the patient was examined with the bladder empty. In the obstetrical and gynecological clinic of the University of Southern California School of Medicine, stress incontinence was present in only 41 per cent of patients with obstetrical sequelae severe enough to necessitate reconstructive operation. In a series of patients (with cystocele, uterine prolapse, etc.) Muellner was unable to establish more than vague correlation between the degree of stress incontinence and the parity of the patient or the degree of difficulty she experienced in labor. He was impressed by the inconstant time relationship between the trauma and the ensuing symptoms and he suggested that incontinence might be owing to acquired irritability of the detrusor muscle that permitted minor stimuli (as in coughing or sneezing) to produce contraction of the vesical musculature with a corresponding relaxation of the internal sphincter and, therewith, urinary leakage.

Kegel¹⁰ stated that exertional incontinence resulting from obstetric trauma is the result of two factors: the actual laceration and separation of muscle fibers and fascia, and the separation of motor endplates from the muscles of pelvic support. He held that the latter results in a relaxation and attenuation

of supports over a period of time, which may result in stress incontinence. Kegel cited the ability of muscle to become innervated, even in adult life, and expressed the belief that active exercise of these muscles increases the muscle tone and hastens the process of reinnervation.

METHODS OF CORRECTION

Many varieties of procedures have been used to correct stress incontinence, including such methods as suburethral injection of paraffin, injection of sclerosing solution, massage and electrical stimulation, torsion of the urethra, and advancement of the urethra.²⁵ As would be expected from the foregoing discussion, the best results followed procedures aimed at supporting the neck of the bladder. Kelly's method of plicating the urethra and the neck of the bladder with fine silk usually is successful in 70 to 80 per cent of patients.^{9, 3} As the procedure is extended to reconstruct more carefully all of the pelvic supports the results become better.^{11, 4} However, it is the usual experience that as the length of the follow-up increases, so does the failure rate. In an effort to attain successful continence in patients not aided by the conventional reconstruction of pelvic supports, operations have been devised to support the region of the bladder neck in other ways. The Martius bulbocavernosus interposition operation utilized tissue from the labium majus, interposing it between the bladder and urethra above, and the vagina below. The Goebel-Stoekel-Frankenheim principle of supporting the urethra with the anterior rectus fascia has been modified by Miller,¹⁶ Aldridge,¹ and Studdiford.²⁵ Millin¹⁸ has so modified this procedure as to accomplish it entirely from above. Shaw²⁴ utilized fascial strips from the thigh, attaching them to the urethra and bladder neck, bringing them out through holes drilled in the pubic bone, and suturing them to the tendinous tissue of the adductor longus muscles. The operation of urethrocystopexy (suspending the urethra and region of the bladder neck to the symphysis pubis) has been advocated in this country by Marshall, Marchetti, and Krautz,¹⁵ and in Europe by Perrin,²¹ and Labry and Charvet.¹² It is not to be doubted that these more extensive and extravaginal procedures do lead to the cure of many patients left incontinent after a complete vaginal procedure. However, with few exceptions,²⁴ they too sometimes fail. In many cases the eventual failure is attributed to a mistaken diagnosis of the cause of incontinence, or to the technical inability of carrying the procedure to its correct conclusion. The point is clear, however, that none of these procedures has a place in the therapy of urge incontinence, passive incontinence of urinary fistulae, or urethral incontinence of neurogenic origin.

The nonoperative treatment of stress incontinence was suggested by Davies in 1938⁴ and advocated as a therapeutic test by Rashbaum and Mandelbaum in 1949.²² However, it was Kegel¹⁰ who effectively applied and demonstrated the practical value of muscular restoration by exercise with a perineometer. The necessity of sustaining the treatment (in 40 per cent of cases it takes longer than two months) and the belief that good results will be maintained only if the patient continues the exercises, would seem minor drawbacks in view of the report of success in 93 per cent of patients.⁸ Jones and Kegel expressed the opinion that operation for relief of stress incontinence should not be done except in the case of prolapse outside the introitus. Their report of cure in 82 per cent of patients who previously had been subjected to reconstructive vaginal operation seems especially significant.

DISCUSSION

A review such as this, citing as it does the reasons for the diversity of opinion concerning the cause and mechanism of stress incontinence, at the same time indicates important factors to be considered before corrective therapy is begun:

1. There is a delicate balance between the intravesical pressure established by the detrusor muscle and the resistance that the urethrovesical junction is able to provide. In fact, it is felt that the internal urethral sphincter is an anatomical and functional part of the detrusor mechanism and that they each are incapable of independent action.
2. In the great majority of cases of stress incontinence it can be demonstrated that the region of the urethrovesical junction occupies the bottom of a funnel-shaped area of relaxation of the base of the bladder when the patient is standing or straining, or that there is a significant increase in detrusor tone.
3. Injury to the tissue in the region of the neck of the bladder, without gross abruption of the bladder supports, may be sufficient to cause exertional incontinence.
4. This defect may become apparent for the first time as the patient reaches, or is past, the climacteric period, and it would seem that atrophic changes in the pelvic supports, in addition to previous obstetric trauma, are important factors.
5. Other defects in urinary continence, attributable to inflammation (trigonitis), tumors, or nerve lesions (multiple sclerosis, spina bifida, tabes dorsalis), usually will not respond to therapeutic methods aimed toward supporting the neck of the bladder.

In light of these factors, if there be any doubt as to the nature and cause of urinary incontinence in a patient, cystoscopic and cystometric studies should

precede any attempt at correction. The choice of therapy then would naturally be consistent with the attending physician's experience and preference. In general, it would seem logical to employ the following principles in selecting therapeutic procedures:

1. If stress incontinence is unassociated with a disturbing cystocele, rectocele, or uterine prolapse, the methods of active exercise of the muscles concerned with pelvic support, as outlined by Davies and by Kegel, are indicated.

2. If a disturbing relaxation of the bladder, rectum, or uterus accompanies stress incontinence, a thorough support of the bladder neck should be incorporated into the vaginal plastic procedure designed to improve the relaxation.

3. If exercises and a thorough vaginal procedure do not relieve true stress incontinence not of neurogenic origin, one of the bladder neck suspension operations (fascial sling or urethrocytopexy) is in order.

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Bronchogenic Carcinoma in San Diego County

Relation of Mortality Rates to Findings in Mass Chest X-Ray Survey

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IN FEBRUARY 1950 a metropolitan mass chest x-ray survey was completed in San Diego County. Of a population of 556,800, almost half—245,061*—were examined by 70 mm. films and records were tabulated on 239,609. This presentation is an analysis of findings from that survey as related to the mortality from bronchogenic carcinoma in 1950 and 1951.

INCREASING INCIDENCE

The earliest figures available from San Diego city and county on the incidence of bronchogenic carcinoma are for 1920. In that year, two of 117 deaths from cancer were attributed to bronchogenic carcinoma, a proportion of 1.7 per cent and an incidence in the general population of 2.6 per hundred thousand. In 1930, the proportion was 3.5 per cent and the incidence 5.3 per hundred thousand; in 1950, 9 per cent and 11.1 per hundred thousand. This increasing incidence parallels the experience in the United States as a whole where, in 1948, the death rate from bronchogenic carcinoma per hundred thousand of population was 11.3, whereas in 1920 the rate was 1.1.

Part of the above computations was based on the 1950 mortality tables for San Diego County, in which 4,630 deaths were recorded.[†] Of these deaths, 683 were attributed to cancer, 62 to bronchogenic carcinoma. More important, in males of 45 years and older, there were 52 deaths from bronchogenic carcinoma, an incidence of 77.6 per hundred thousand among the 67,200 in that age group. In 1950, 52 males and 10 females died of bronchogenic carcinoma; in 1951, 58 males and 7 females (Table 1). In the two years combined, the median age group was 60 to 64 for males and 65 to 69 for females. It is notable that 86.6 per cent of the persons who died of bronchogenic carcinoma were males.

*This was 81.7 per cent of the 300,000 estimated eligible for x-ray survey in the San Diego metropolitan area.

[†]Includes deaths of San Diego County residents who died elsewhere in California.

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• Nearly half the population of San Diego County was examined by chest x-ray for bronchogenic carcinoma. The disease was correctly diagnosed in 20 persons, of whom 17 died. Twenty-four others in whom it was not detected in survey films died of the disease in the following two years.

Of the 20 cases found, 16 were in men, all more than 54 years of age, and of the 24 who died after "negative" classification, 20 were men over 40.

The death rate for men over 40 years of age from bronchogenic carcinoma is about one in a thousand. Because of the frequently rapid progress of the disease after onset, and the poor prognosis after the appearance of symptoms, x-ray examination every six months for men over 40 should be considered.

CASES FOUND IN SURVEY

Bronchogenic carcinoma was correctly diagnosed through the 70 mm. survey films in 20 persons; 24 others whose films had been classified as "negative" died in 1950 and 1951 of bronchogenic carcinoma. This total of 44 cases is an incidence of 18.1 per hundred thousand persons processed in the survey. Of the 20 cases found through the survey, final diagnoses were obtained from the patients' physicians by the survey's follow-up system in only 12. In the other eight cases the diagnosis did not accord with that made on the basis of the survey film or the patients were lost to follow-up until the death certificates carried the presumably correct diagnosis of bronchogenic carcinoma. The proportion of cases found in the survey, then, was 8.3 per 100,000 participants, close to the 7.8 per 100,000 for a similar survey of 536,072 persons in Boston.⁴

More important than the general case-finding average is the fact that 16 of the 20 cases found were in men, who were all over 54 years of age (Table 2). As the number of men more than 54 years old screened in the survey was 20,837, the proportion in this group was 76.92 per 100,000.

TABLE 1.—Bronchogenic Carcinoma as a Cause of Death by Sex and Age Groups, San Diego County (Including City).*

Age	Combined 1950 and 1951	
	Male	Female
25 to 29.....	1	....
30 to 34.....	....	....
35 to 39.....	1	1
40 to 44.....	2	1
45 to 49.....	9	....
50 to 54.....	8	1
55 to 59.....	23	4
60 to 64.....	22	1
65 to 69.....	18	5
70 to 74.....	14	....
75 to 79.....	8	3
80 to 84.....	1	1
85 to 89.....	3	....
Total	110	17
Total, per year.....	127	

*Includes San Diego County residents who died elsewhere in California.

TABLE 2.—Mass Survey Participants with a Final Diagnosis of Bronchogenic Carcinoma, by Age and Sex.

Age	70 mm. Positive		70 mm. Negative	
	Male	Female	Male	Female
25 to 29.....	....	....	....	....
30 to 34.....	....	....	....	....
35 to 39.....	....	....	....	....
40 to 44.....	....	....	1	....
45 to 49.....	1	....	2	1
50 to 54.....	1	....	2	....
55 to 59.....	4	....	7	1
60 to 64.....	4	....	4	1
65 to 69.....	4	2	1	....
70 to 74.....	3	....	1	....
75 to 79.....	1	....	1	1
80 to 84.....	....	....	1	....
85 to 89.....	....	....	....	....
Total	16	4	20	4
Total, male and female..	20		24	

CASES MISSED

Against this high proportion is the fact that 20 cases in males over the age of 40 were missed in the survey from a total of 47,296 screened in those ages, a proportion of 42.55 per 100,000; and in the age group 55-59 years, seven men who were classified as "negative" in the survey died within two years of bronchogenic carcinoma—a rate of 114.7 per 100,000 in the 6,124 men in that age group who were screened.

OUTCOME OF CASES

As Table 3 indicates, the time from detection of the neoplasm in the 70 mm. film to death averaged nine months—six months for males and thirteen months for females. Five patients were asymptomatic at the time of the 70 mm. film; three of them (see 1706598, 1652005 and 1200997 in Table 3) underwent pneumonectomy at one, two and three months, respectively, after the discovery of the lesion by means of the film, and all three had metastases at the time of operation.

Death certificates are on record for 17 of the 20 persons in whom bronchogenic carcinoma was diagnosed on the basis of survey films. One (1107324) was alive and well in April 1952; on the same date another (1104068) was reported working, though very dyspneic. The third survivor (0111841), who had an adenocarcinoma proven by bronchogenic biopsy, refused operation and was lost to follow-up.

Of the 12 bronchogenic carcinomas pathologically classified, eight were squamous cell carcinomas and four were adenocarcinomas. In the other eight cases the type of lesion was not specified.

The author reviewed the 70 mm. films of the 24 persons who were classified "negative" in the survey but died of bronchogenic carcinoma. The impressions gained were that at least six of these persons should have been recalled for 14x17-inch films; that four of the six could have been classified as neoplasm suspects on the basis of the 70 mm. films alone (0512543, 0718217, 1910692, and 1005573 on Table 4), and that two of the four (0718217 and 1005573) may have been asymptomatic at the time the films were made. The detrimental effect of a "false negative" report, perhaps dissuading a person who otherwise might seek further investigation of symptoms, cannot be overlooked.

DISCUSSION

For the persons found "negative" in the survey who later died of bronchogenic carcinoma, the average time from the screening to date of death was 16 months. Most important, the average time before appearance of symptoms was only nine months. As only 10 per cent of patients with bronchogenic carcinoma can be cured after appearance of symptoms,^{1, 2} a repetition of the 70 mm. filming a year later, while it might well have indicated the disease, would have been of little practical value.

The conclusion, therefore, is that six months would be a safer interval for roentgen screening of males over 40. Moreover, the author agrees with Pendergrass³ that for adequate survey examination, films must be made on inspiration, on expiration and laterally, and must be of optimum quality—quality being more important than size.

A program entailing surveys every six months should not receive lip service unless there is a possibility of putting it into effect. Although the proportion of failures here recorded may justifiably lead to question as to whether mass attempts at detection of neoplasm by photofluorography should be abandoned, it is possible to contemplate a program whereby the necessary studies would be made on every man over the age of 40. In San Diego, where the tuberculosis case-finding operation of the Department of Public Health taxes the staff and budget

TABLE 3.—Mass Survey 70 mm. Positive Bronchogenic Carcinoma Cases.

Survey No.	Sex	Age	Survey 70 mm. Date	Symptoms at Survey Date	Date	Operation—Type	Death Date	Duration per Death Certificate	Interval from 70 mm. Film to Death	Type of Bronchogenic Carcinoma	Autopsy
1201254	M	67	12-18-49	1 mo.	1-28-50	Died before operation	2-2-50	Not stated	1	Adeno.	Yes
1706598	M	56	12-28-29	No	1-31-50	Pneumectomy*	1-31-50	Approx. 2 mo.	1	Adeno.	Yes
1652005	M	64	1-21-50	No	5-3-50	Pneumectomy*	5-3-50	Not stated	3	Not specified	No
1408857	M	64	1-11-50	6 mo.	9-21-50	No	9-21-50	Not stated	8	Not specified	No
1909993	M	68	1-19-50	9 yr. (cough)	No	Thoracotomy*	10-21-50	6 mo.	9	Epidermoid	Yes
0308032	M	60	12-30-49	1 yr.	6-21-50	Refused	8-19-50	12 mo.	7	Adeno. (Bronchoscopic biopsy.)	Yes
0111841	M	58	12-29-49	2 mo.	No		Moved out of area 1951 to 1400 County		---		---
1104068	M	67	12-15-49	Beginning	3-9-50	Pneumectomy	Alive 1-23-52	Not stated	10	Epidermoid	No
0300344	M	72	12-6-49	6 mo.	2-27-50	Pneumectomy	11-9-50	Not stated	26	Epidermoid	No
1107321	M	59	1-5-50	14 yr. (asthma)	5-28-50	Pneumectomy	Alive well	---	---	Epidermoid	---
1200997	F	48	12-7-49	No	2-27-50	Pneumectomy*	7-24-52	7 mo.	7	Epidermoid	No
0502103	F	54	12-9-49	No	11-21-51	Biopsy cervical lymph nodes	12-26-52	24 mo.	17	Not specified	No
1707713	F	67	1-6-50	No	No	None	10-29-50	Not stated	9	Adeno. (Ref. 1)	Yes
0211541	F	69	1-21-50	Beginning	5-1-50	Thoracotomy*	9-9-50	9 mo.	7	Adeno. (Ref. 2)	No
0201901	M	77	12-8-49	Beginning	No	None	10-7-50	Not stated	10	Not specified. (Ref. 3)	No
1803081	M	65	12-8-49	3 weeks	No	None	1-13-50	10 mo.	9	Not specified. (Ref. 4)	No
1307043	M	73	1-12-50	1 yr.	9-48	None	8-13-51	1 yr.	1	Not specified. (Ref. 5)	Yes
0908069	M	64	1-19-50	2 yr.	No	Pneumectomy	8-30-50	2 yr.	7	Not specified. (Ref. 6)	No
0400097	M	70	12-6-49	Not stated	No	None	1-8-50	1 yr.	2	Epidermoid. (Ref. 7)	Yes
0500772	M	56	12-7-49	Yes	No	None	1-11-50	9 mo.	1	Not specified. (Ref. 8)	No

* Metastases at time of operation.

† Average time interval: 70 mm. film to death, 9 months;

average, males, 6 months; average, females, 13 months.

1. Closed in survey follow-up as SN 360-1236 (healed primary tuberculosis) on diagnosis by private M.D., April 12, 1950, after survey review board had made diagnosis of "rule out neoplasm of lung on January 31, 1950.

2. Closed in survey follow-up as SN 361-190 (chronic pneumo-

nitis) on diagnosis by private M.D., April 7, 1950. Survey diagnosis on February 9, 1950 was (1) questionable pneumonitis; (2) questionable tuberculosis, moderately advanced, (3) elevation of diaphragm.

3. Closed in survey follow-up as SN 360-8XX (neoplasm of lung, type undetermined) June 7, 1950. Surgery had been advised against by private M.D. because of age. Was a neo suspect prior to survey.

4. Closed in survey follow-up as SN 360-1232 (pulmonary tuberculosis, moderately advanced) on diagnosis by private M.D.

TABLE 4.—Persons with "Negative" Diagnoses on 70 mm. Films in the San Diego Mass X-Ray Survey Who Died of Bronchogenic Carcinoma in 1950 and 1951.

Survey No.	Sex	Age	Duration per Death Certificate	70 mm. Date	Death Date	Interval from 70 mm. Film to Death	Interval from 70 mm. Film to Onset of Symptoms	Autopsy
0512543*	M	64	3 months	1-3-50	3-27-50	2	0	Yes
0217513	M	64	Not stated	12-17-49	8-8-50	9	1	Yes
1303446†	M	59	3 months	12-17-49	10-7-50	10	7	No
1701238†	M	53	Not stated	1-16-50	11-8-50	11	Unknown	Yes
0718297*	M	45	3 months	1-16-50	3-12-50	7	4	Yes
0111650	M	64	2 months	1-30-50	6-10-50	4	1	Yes
1909179	M	45	Not stated	1-31-50	9-22-51	20	Unknown	Yes
1906632*	M	80	Not stated	1-21-50	11-12-51	21	Unknown	No
0408064	M	39	6 months	12-21-49	7-28-51	19	12	No
1308361	M	80	3 months	1-20-50	8-3-51	15	11	No
1005172*	M	56	18 months	1-20-50	8-3-51	15	0	Yes
0301038	M	56	4 months	1-20-50	6-11-51	16	11	No
1409893	M	72	Not stated	1-18-50	9-13-51	19	Unknown	Yes
0508931	M	55	6 months	12-20-49	9-13-51	21	14	No
1908731	M	55	24 months	1-11-50	9-4-51	19	4	No
0705951†	M	55	1 month	12-13-49	8-9-51	17	15	No
0605945†	M	55	1 month	12-16-49	8-21-51	15	7	Yes
1411139	M	52	12 months	1-30-50	8-28-51	19	6	No
0112772	M	52	3 months	1-30-50	11-30-51	22	17	No
1802645	M	57	4 months	1-30-50	4-6-51	14	7	No
1507635	M	57	6 months	1-11-50	10-1-50	23	27	No
1306062	M	73	Not stated	1-11-50	3-2-51	21	Unknown	Yes
0808983	F	56	6 months	1-24-50	3-2-51	13	6	No
0503843	F	61	Not stated	12-10-50	4-12-51	16	Unknown	Yes

* Grossly positive on review.

† 14 x 17 indicated.

‡ Previously clipped and not available for review.

7 months average

16 months average

9 months average

to screen 70,000 70 mm. films and patients annually, it would be necessary, for ideal neoplasm case-finding, to make three films on each of 67,200 males twice yearly, or a total of 403,200 additional films. This, naturally, would be a staggering burden and out of balance with more important health department activities. Yet it is difficult to expect that many of the 67,200 men would spend \$30 a year for prophylactic screening by private physicians.

These statistics should stimulate thoracic surgeons, who have the greatest knowledge and experience in the diagnosis, treatment and prognosis of bronchogenic carcinoma, seriously to consider devoting the amount of time they now spend on such activities instead to the study of this disease. With such talent thus employed, it would seem safe to predict that soon there would be better diagnostic tools than x-ray films of the chest and better therapeutic weapons than pneumonectomy. The fact that man has two lungs may have retarded, temporarily, such a search.

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NOTE: Mimeographed copies of more extensive tabulated data used in the preparation of this presentation may be obtained from the author.

ACKNOWLEDGMENT

The author is especially indebted to J. B. Askew, M. D., director of the San Diego Department of Public Health, and Lester Breslow, M. D., chief of the Bureau of Chronic Diseases, California State Department of Public Health, whose efforts resulted in the assignment of "chronic disease funds" to finance the alphabetical indexing of the nearly one-quarter million records of participants in this survey; to the San Diego County Medical Society, whose leaders endorsed the setting up of machinery to follow survey neoplasm suspects and whose members responded in a commendable manner in this follow-up; and to Miss Mae Goshert, chief, Bureau of Vital Statistics, San Diego Department of Public Health, and Mrs. Martha Eaton Simmons, public health analyst, Bureau of Chronic Diseases, California State Department of Public Health, who conceived and executed the plan by which these records were sorted.

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CASE REPORTS

- Prolapse of Gastric Mucosa Through the Pylorus
- Traumatic Rupture and Avulsion of the Diaphragm
- Cytomegalic Inclusion Disease in an Adult

Prolapse of Gastric Mucosa Through the Pylorus

JOHN J. BAZZANO, M.D., and
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PROLAPSE OF REDUNDANT gastric mucosa is a definite clinical entity which has come to be better recognized during the past decade. Radiologists are calling attention to it with increasing frequency.

According to Rees,⁷ Von Schmieden reported the first case in 1911. Melamed and Hiller⁶ reviewed the literature in 1943 and found only 19 cases reported. Since then the condition has been noted in a fairly large number of cases. It has been reported observed in as many as 7.7 per cent of patients examined roentgenographically by gastrointestinal series, although that figure is considered rather high. Scott⁸ stated that it was noted in 1.04 per cent of roentgen examinations of naval personnel with gastric complaints. The large discrepancy between those two reports of incidence can probably be attributed to the fact that the average age of naval personnel is relatively low, whereas the condition seems to occur more frequently in the fourth and fifth decades of life.

Following is a report upon a patient with pronounced prolapse of gastric mucosa who was recently observed by the authors.

REPORT OF A CASE

A 41-year-old white woman had had "indigestion" for five years with such symptoms as bloating, sour stomach, cramps, diarrhea and occasional bloody stools which the patient attributed to hemorrhoids. In September 1950 she began having substernal pain every day. It started after breakfast and lasted all day. Upon roentgen examination of the gastrointestinal tract a duodenal ulcer was noted. Dietary measures resulted in great improvement. X-ray examination was carried out again in January 1951 and although there was no evidence of ulcer there was a polypoid mass in the lower portion of the stomach and pylorus. Exploratory operation was advised.

The patient then came under the authors' observation, and on January 25, 1951, another x-ray examination was carried out.

The roentgenologist reported: Fluoroscopically, moderate hypertrophy of the mucosa of the cardiac section was noted. There was increase in peristalsis in the distal portion of the stomach. The rugal markings extending through the pyloric canal were greatly accentuated. A space-consuming lesion within the outline of the duodenum had the appearance of a polypoid or pedunculated lesion within, but not obstructing, the cap (Figure 1). At six hours the stomach was empty.



Figure 1.—Film of barium-filled duodenum with appearance of a space-consuming lesion.

The blood count was normal.

Laparotomy was done February 11, 1951. There was a soft, spongy diffuse mass in the prepyloric region. It was easily pushed through the pylorus into the duodenum and it seemed to fill the entire prepyloric area. There was no evidence of ulceration. The mass was thought to be prolapsed gastric mucosa, and owing to the extensiveness of the lesion partial gastrectomy with retrocolic anastomosis was performed.

The pathologist reported a moderate degree of low grade hypertrophic gastritis with prolapse of the mucosa through the pyloric sphincter.

The patient recovered and had no recurrence of symptoms.

ETIOLOGY

Several theories have been advanced as to the cause of mucosal prolapse. Eliason² believed that a low grade inflammatory process in the lower third of the stomach causes hypertrophy of the mucosa, which in some cases leads to prolapse. This view was corroborated by Haworth and

Rawls¹ in a discussion of prepyloric gastritis, a process limited to the gastric mucosa, which becomes thickened and may prolapse through the pylorus. However, they considered the gastritis as a psychosomatic disorder in which the parasympathetic system is subjected to excessive stimulation of central nervous system origin.

Rees⁷ attributed the condition to a resistant narrowing of the pylorus, causing hyperperistalsis which loosens the attachment of mucous membrane. Recently, Melamed and Melamed⁵ reported four cases in which prolapse of the mucosa existed simultaneously with congestive heart failure. In two of the cases the diagnosis was made radiologically and confirmed at autopsy; in the other two the diagnosis was also made by roentgen study, but with the clearing of the congestive failure, the prolapse also disappeared so far as could be determined by fluoroscopic and roentgen film examination. The Melameds concluded that edema of the mucosa from congestive heart failure may cause redundancy and prolapse.

Scott⁹ advanced the theory that prolapse results from excessive and abnormal mobility of the prepyloric mucosa on the muscularis, and that the activating factor is hyperperistalsis owing to neurogenic or chemical stimuli.

Symptoms

Prolapse of gastric mucosa into the duodenum causes symptoms of so wide a variety that diagnosis on the basis of clinical observation is extremely difficult. In general, symptoms are not severe, unless there are complications, but they are of sufficient intensity to cause patients to seek medical advice. Cramping pain and intermittent epigastric distress are the most common symptoms. The distress may be in the form of fullness, bloating, belching and heartburn. Pain is fairly constant. It is centered in the epigastrium, but may radiate to the costal margins or to the back, or as in the case herein reported, it may be substernal. Nausea alone or with vomitus is next in frequency. Hematemesis and melena may be present if there is ulceration. Gastric acidity is not distinctive. Anorexia, anemia and loss of weight may be prominent symptoms. In short, the symptoms are such as those that are also associated with many other gastric or duodenal disorders, and frequently with gallbladder or liver disease.

Pathology

Usually there is redundancy of mucosa of the lower end of the stomach with hypertrophied rugae. The mobility of the mucosa on the muscularis is greater than normal. The pyloric muscle becomes hypertrophied. There may be evidence of local gastritis. In the case reported herein, the mucosal folds were very redundant and could easily be pushed through the pylorus for a distance of 5 cm.

Diagnosis

As the clinical symptoms are not distinctive, diagnosis is made by radiological studies. To be noted roentgenographically is a filling defect of the duodenum observed as a lobulated mushroom-shaped area of translucence with a central thin streak of barium, and intact mucosa. The translucent area may vary in size, shape and appearance during a single examination. There is no evidence of irritation of the duodenal bulb, but gastric peristalsis is hyperactive in most cases. Mucosal prolapsus is most difficult to differentiate from prolapsed pedunculated gastric tumors and polyps.

Complications

Complications sometimes occur:

(a) Ulceration, which apparently occurs quite frequently and may cause the prolapsus to be overlooked.

(b) Hemorrhage, which may follow minor erosions of the mucosa or actual ulceration.

(c) Gastric retention, because of variable pyloric obstruction.

(d) Malignant changes occurred in at least one case.⁸

Treatment

In mild cases conservative therapy is indicated. This consists of a regimen similar to that prescribed for patients with ulcer, including the use of mild antispasmodics and an antacid preparation if needed. In most cases the condition will be well controlled by this treatment.

In severe or progressive cases, operation must be considered. Many different surgical procedures have been advocated, but not enough data have been obtained as yet to permit adequate evaluation of the relative advantages of each.

Some of the operations employed are partial gastrectomy, pyloroplasty, gastrojejunostomy, simple excision of redundant mucosa with or without pyloroplasty, and anchorage of the mucosa to the muscularis. The authors believe partial gastrectomy and excision of the redundant mucosa with pyloroplasty are the better procedures.

Indications for operation are: (1) Persistent pain after a long period of adequate medical treatment; (2) hemorrhage; (3) obstruction of the pylorus.

SUMMARY

Prolapse of gastric mucosa through the pylorus is a definite clinical entity with symptoms very similar to those of peptic ulcer or allied gastric disease. The clinical manifestations may suggest the diagnosis, but the principal diagnostic aid is roentgen study.

In most cases conservative treatment gives satisfactory results. Operation is indicated only when symptoms do not clear up with medical management, or when a large tumor-like defect is observed in roentgen study, or when complications such as hemorrhage or obstruction occur.

A case in which operation was done is reported herein.
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Traumatic Rupture and Avulsion of The Diaphragm

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RUPTURE of the diaphragm, or severance of the fibers of this muscle, should be distinguished from avulsion or separation of the diaphragm from the wall of the chest. Although both conditions are traumatic in origin and may have similar consequences, the symptoms, signs and laboratory findings being indistinguishable, the procedures necessary for repair are usually dissimilar.

Diaphragmatic rupture or avulsion has been attributed to a multitude of causes, varying from sneezing to an airplane power dive. Traffic accidents are prominent as a cause of this unusual injury; others are crushes, stabs, blows, bullets, a spicule of fractured rib, coughing, and straining during bowel movement. It is conceivable that congenital weakness may sometimes be a predisposing factor.

ANATOMY

The diaphragmatic muscle converges from its circumference to the large central tendon, into which it is inserted. The posterior origin is strong and tendinous, being part of the anterior longitudinal ligament of the vertebral column, and is not so likely to be avulsed or split. On each side the diaphragm originates from the lumbocostal arches or arcuate ligaments, and further laterally from the inner surfaces of the lower six ribs and costal cartilages. The anterior origin is from the posterior xiphoid region.

The important structures which pass through or behind the diaphragm are well protected by tendon or by decussating muscle bundles and are usually not injured with the diaphragm. These are the inferior vena cava, esophagus, aorta, thoracic duct, sympathetic and splanchnic nerves, and azygos and hemiazygos veins.

DIAGNOSIS

Although symptoms vary somewhat, the classic signs of shock are usually present in varying degree, the patient lying with knees drawn up against the chest, faint and perspiring or even in collapse. There may be pain in the upper part of the abdomen and left shoulder. The severity of trauma and of concurrent injuries will, of course, affect these symptoms.

Physical signs, in addition to those of shock, are the result of diminished vital capacity, mediastinal shift and thoracic displacement of the abdominal viscera. Such signs may not appear for hours when the viscera are slowly displaced into the thorax. Diminished chest excursion, dyspnea and cyanosis are present to greater or less degree, as are rapid thready pulse, diminution or absence of breath sounds on the left (sometimes with splashing or tinkling noises), and resonance on percussion changing to dullness as fluid accumulates. If the stomach is in the chest and is dilated, tympany is usually notable, sometimes as high as the third rib. Typically, the left upper abdomen and the lower chest are tender, the abdomen rigid. Often the abdomen is scaphoid, becoming progressively more so as abdominal viscera are displaced into the chest. The cardiac apex is usually displaced to the right.

Laboratory findings are of no aid in specific diagnosis, except for the following observations which may be made roentgenographically.¹

1. Presence of abdominal viscus, such as stomach or colon, in the chest. (Often a gas bubble above a fluid level may be visualized in the organ.)

2. Invisibility of the injured dome, owing to concentric contraction on either side of the tear. Blood clots might also conceal the dome.

3. Intermittent twitching (seen by fluoroscope).

4. Pneumoperitoneum occurring when the abdomen is not openly wounded.

5. Pneumothorax occurring when the thorax is not wounded, but a hollow viscus is penetrated.

6. Absence of accumulated blood from the thorax in the presence of extensive injury of the lung with atelectasis and pneumothorax (evidence that blood has escaped through an opening in the diaphragm).

It is important to remember that roentgenographically visible changes may not appear for some hours after injury and that x-ray films and fluoroscopy should be repeated if indicated by physical signs and if the patient's condition is not definitely improving.

TREATMENT

Surgical operation is, of course, necessary for treatment of diaphragmatic injury, and as in any severe injury the patient must be brought to the best possible condition before operation. Sufficient time may be taken to overcome the initial shock, to administer fluids, blood, sedatives and antibiotics, and to empty the stomach by nasal catheter. The latter procedure is very important, for in many cases the stomach becomes enormously distended with fluid while angulation of the gastroesophageal junction prevents vomiting.

The authors prefer the transthoracic or the combined abdominal and thoracic approaches for operation, as with the abdominal approach it is difficult to replace the abdominal contents and hold them in place while the diaphragm is being repaired, especially since it is necessary to work high up under the costal arch.

If the transthoracic approach is used, anesthesia is administered intratracheally. Then the patient is turned to the unaffected side (almost always the right), and the eighth interspace is incised or the ninth rib resected.

The spleen is usually found in the thorax. It should be carefully inspected for tears in the capsule or at the hilus, and splenectomy, if indicated, should be performed at this stage. The other abdominal viscera should be inspected, repaired if injured, and replaced into the abdomen. Intra-abdominal pressure may make the replacement and retention of these organs very difficult. In one case, the authors brought the intestines out onto the anterior abdominal wall through a rectus incision to permit repair of the diaphragm.

It is usually advisable to crush the phrenic nerve. The pulmonary ligament is usually found to be torn, but need not be repaired.

Repair of laceration of the diaphragm often is very simple, interrupted non-absorbable sutures of cotton or silk being inserted in two rows. The use of fascia lata, or heavy sutures, does not appear to be necessary. It is conceivable that if there is loss of substance of the diaphragm, replacement by tantalum gauze might be required.

Replacement of avulsed diaphragm is somewhat more difficult. Tension must be applied to hold the diaphragm against the thorax until it can be made fast. Simple sutures cannot be relied on to hold, and there are no strong fascial structures to which the diaphragm can be attached. The authors found that mattress sutures looped through the



Figure 1 (Case 1).—*Left*, Taken two days after entry (preoperative), showing almost complete opacity of the left side of the chest with some mediastinal shift to the right. *Center*, preoperative film after barium ingestion, showing esophageal dilation, intrathoracic stomach. *Right*, twelve days after thoracotomy, showing a fistula from the splenic flexure to the left side of the chest.

whole thickness of the chest wall except the skin and subcutaneous tissues, some sutures being passed around a rib, would effectively hold the diaphragm abutted tightly against the wall. No. 2 catgut was used for these sutures, and all sutures were placed before any were tied.

For repair of the esophageal hiatus, one or two sutures should catch the external coat of the esophagus or stomach.

Chest closure is done in layers and a drainage tube is brought out through a stab wound to an underwater seal.

Postoperatively, oxygen should be given while dyspnea is present. Nasal suction is applied, and fluid and electrolytes must be replaced. Blood, proteins, vitamins and antibiotics are administered as indicated. Deep breathing, removal of bronchial secretions and early ambulation are important.

CASE REPORTS

CASE 1: A 24-year-old man was admitted to the Monterey County Hospital shortly after an automobile accident, with multiple lacerations and abrasions, open fractures of both tibiae, and fracture of the left mandible. He was rational and in only moderate shock. The pulse was regular, the rate 130. Systolic blood pressure was 110 mm. of mercury, diastolic 80 mm. No injury of the chest was noted. With the patient under general anesthesia, the fractured tibiae were debrided, the fractures reduced and casts applied.

On the following day the patient was dyspneic and cyanotic, with temperature 102° F., pulse rate 152, respirations 24 per minute, and systolic blood pressure 76 mm. of mercury, diastolic 58. He was nauseated and vomited several times.

The left side of the chest was dull to percussion and breath sounds were absent, but the apex was hyperresonant, and high-pitched tinkling sounds could be heard. The heart was so displaced to the right that the maximum impulse was at the right sternal border. The left side of the chest was completely opaque in an x-ray film, which showed mediastinal shift to the right (Figure 1). No fluid was withdrawn on thoracentesis.

Dyspnea, vomiting and fever continued through the third day in hospital, and tympany and hyperresonance were noted over the upper half of the left side of the chest. On the following day, despite several transfusions of whole blood, the patient's condition became steadily worse. On

x-ray examination, in addition to the mediastinal shift, the diaphragm appeared to be elevated to the level of the second interspace. After a small barium meal, the stomach was seen to be in the thorax, the esophagus dilated because of the pronounced angulation of the gastroesophageal junction. The roentgenologist believed that the diaphragm was elevated above the stomach (Figure 1).

Because of the gastroesophageal obstruction, dyspnea, cyanosis and pronounced mediastinal shift, it was decided to explore the thorax. The preoperative pulse rate was 140, the blood pressure 120 mm. of mercury systolic and 60 mm. diastolic. An anesthetic agent was administered intratracheally. An incision was made through the full length of the seventh interspace (the eighth rib was resected later in the operation).

The diaphragm was found to be avulsed from the left anterior and lateral walls of the chest, the tear extending from the paravertebral gutter almost to the sternum. The stomach, the transverse colon, the spleen and several loops of small intestine were crowding into the thoracic cavity. The stomach was greatly distended and congested; it appeared to be obstructed, and the venous circulation was impaired. There were two small lacerations of the spleen. The pulmonary ligament was torn. Two thousand five hundred cc. of serous fluid was aspirated from the chest cavity (this yielded no growth on culture). The spleen was removed and the phrenic nerve was crushed. The stomach, the small intestine and the colon were replaced into the abdominal cavity, where they were held in place with some difficulty.

The principal injury was true avulsion of the diaphragm from the wall of the chest. The difficulty in repair was that the endothoracic fascia was not firm enough to hold sutures from the edge of the diaphragm. Therefore, continuous sutures of No. 2 catgut were looped through the entire thickness of the chest wall except the skin and were reinforced by interrupted mattress sutures of the same material passed through the seventh interspace.

It appeared that the chest was thus completely closed from the abdominal cavity. It was later learned that a knuckle of colon at the splenic flexure either was caught in the suture or subsequently slipped up through a small rent, and became strangulated. The latter seems more likely, as great care was used in keeping the abdominal contents

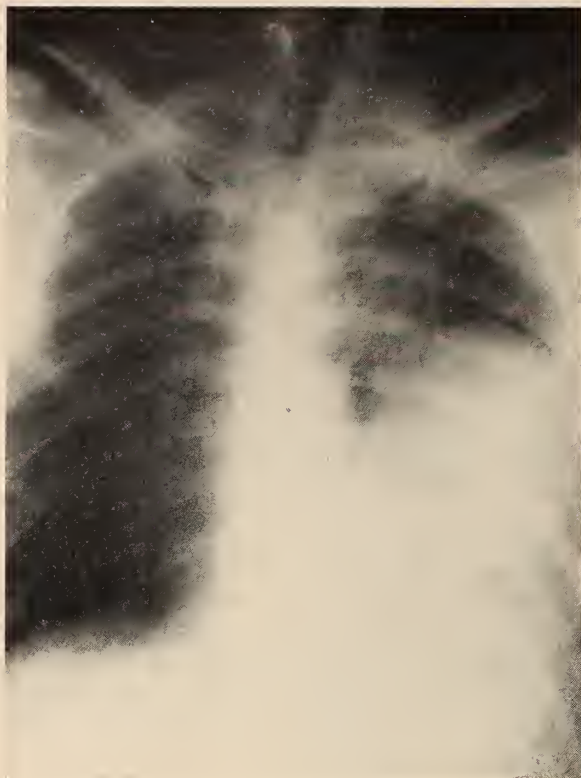


Figure 2 (Case 2).—Opacity of the lower two-thirds of the left side of the chest.

from the suture line. It is entirely possible that a small part of the edge of the diaphragm either was not sutured securely or subsequently pulled away from the wall of the chest.

A routine chest closure was done and a water-sealed drainage tube was placed through a stab wound in the posterior axillary line. Wangenstein gastric suction was instituted.

The patient's condition improved during the next few days; dyspnea and cyanosis diminished considerably. The intrathoracic tube drained poorly and was removed after 48 hours.

Dyspnea returned by the fifth postoperative day; it was relieved by removal of 2,300 cc. of turbid fluid from the left side of the chest. On the following day, x-ray examination showed that the mediastinum had shifted well back toward the left and the lung was expanded 60 per cent.

On the seventh postoperative day, 300 cc. of air and 150 cc. of fluid, fecal in appearance, were aspirated from the left side of the chest. On the ninth postoperative day, 6 cm. of the left sixth rib was resected. There was gas and about 500 cc. of fluid, apparently fecal, in the chest. A gray fibrin-covered empyematous cavity was opened and packed. Two days later the gastric suction tube was removed and the patient tolerated liquids taken by mouth.

Twelve days after the first operation a barium enema was given and on x-ray examination a fistula between the splenic flexure and the left chest was observed (Figure 1). On the same day transverse colostomy was done to divert the entire fecal stream.

Although the patient's condition gradually improved, fever continued as high as 100° F. Twenty-four days after the first operation, a left oblique subcostal incision was made. The colon was found adhering to the left posterior

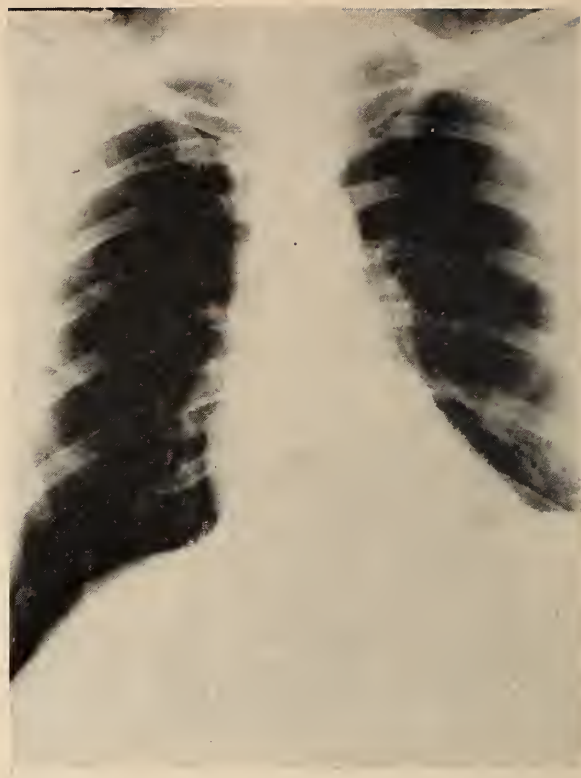


Figure 3 (Case 2).—Film taken six months after operation, showing a normal chest.

diaphragm, with a small opening extending through the diaphragm. The splenic flexure was resected and end-to-end anastomosis was done.

Six days later a large area of pneumothorax developed on the left side and the patient became very ill for a few days. A week later a small abscess in the subcostal incision was opened. Improvement was gradual while the chest wound continued to drain a small amount of seropurulent fluid.

Convalescence was slow. The fractures healed satisfactorily. The artificial anus was closed when the patient had been in hospital about three months. The chest and abdominal wounds healed, the latter very slowly. The patient was discharged six and a half months after admission.

CASE 2: A 38-year-old man, thrown clear from an overturning automobile, fell prone on the highway. On admission to the Monterey County Hospital, he was unconscious and cyanotic. Respirations were rapid and grunting. The pulse was good, the rate 112. The systolic blood pressure was 128 mm. of mercury, the diastolic 84. In addition to multiple minor abrasions and contusions, there was a laceration of the right brow. The left pupil was dilated and reacted sluggishly to light.

The trachea was shifted to the right. The upper two-thirds of the left thorax was dull to percussion, the lower third flat, particularly on the lateral aspect. No breath sounds were heard on the left side. Peristalsis was occasionally heard laterally, just above the flattened area. There was an abrasion over the left costal margin. No abnormalities were noted in the right lung, and the abdomen was flat and soft.

On x-ray examination the left anterior diaphragm was seen to be elevated to the level of the second rib, the cardiac shadow displaced to the right. There was a large air bubble under what appeared to be the diaphragm in elevated posi-

tion, and it was conjectured that this might indicate herniation of the stomach above the diaphragm rather than elevation of the diaphragm (Figure 2).

Three hours after entry the patient regained consciousness and rallied on continuous oxygen and plasma infusion. Nineteen hours after entry he was transferred to a private hospital where, after intratracheal anesthesia and blood transfusion, the left thorax was opened through the eighth interspace. Immediately beneath the incision the traumatized spleen appeared, with the splenic flexure and most of the transverse portion of the colon and the omentum. Several loops of small bowel also lay in the thoracic cavity.

The entire stomach, distended to capacity with food, had rotated 180 degrees to the left, the lower esophagus was angulated, and the greater curvature of the stomach was at the level of the apex of the left lung. The lung was completely atelectatic. The diaphragm, avulsed from sternal and anterior attachments, had a tear in it from the middle of the avulsed border to the posterolateral border, and it was lacerated from the esophageal hiatus to the costal attachment.

The thoracotomy wound was extended downward into a left upper rectus incision, through which the assistant placed his hand to retain the displaced viscera in the abdominal cavity, in order to facilitate repair of the extensive diaphragmatic defect. It was necessary to crush the phrenic nerve. The avulsed border of the diaphragm was then reattached to the anterior thoracic cage about one inch above the original site. This was accomplished by means of interrupted through-and-through mattress sutures of doubled No. 2 chromic catgut, the costal cartilage and ribs being encircled wherever possible.

The long anteroposterior rent was closed with interrupted No. 16 cotton and the suture line "pleuralized" by a continuous over-and-over suture of 00 chromic catgut. The lung was reexpanded, a Pezzar catheter placed for underwater drainage and the wound closed in the usual manner.

Except for the accumulation of 800 cc. of serosanguinous fluid in the right pleural cavity, the postoperative course was uneventful.

The patient returned to his former occupation in two months and has been perfectly well for the two years since. Chest x-rays made at six-month intervals have shown no abnormalities (Figure 3).

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Cytomegalic Inclusion Disease in an Adult

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THE PRESENCE of intranuclear inclusions typical of cytomegalic inclusion disease has been reported observed at autopsy in the salivary glands of as many as 32 per cent of stillborn, newborn and young infants regardless of the cause of death.⁹ Smith and Vellios⁶ collected reports of 89 cases in infants and children, not including stillborn infants, in which there were more or less generalized inclusions. From a study of those cases, they concluded that (1) in infants under two months of age generalized infection by the sali-

From the Pathology Service of the U. S. Naval Hospital, Oakland. The statements and conclusions expressed by the authors are their own and do not necessarily reflect the opinion or policy of the Navy Department.

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vary gland virus is usually a primary, fatal disease and that the most common manifestations of it are blood dyscrasia and hepatic damage; (2) in children over two months of age the disease is most often associated with another primary disease and plays only a minor role.

Reports of seven cases in adult patients in which intranuclear inclusions occurred in large cells at various points in the alimentary tract from the esophagus to the anus, without evidence of generalized disease, have been collected.² There are, however, reports of only four cases of generalized cytomegalic inclusion disease in adults. Following is a report of such a case in an adult who was extensively studied during the last eight months of his life, although as has always been the case the diagnosis was not made until autopsy material was examined.

REPORT OF A CASE

A 42-year-old married white man first noticed slight enlargement of the abdomen in September, 1949. In October, following a slight cold, a persistent hacking, nonproductive cough developed. In late November the patient began having fever, 99° F. in the morning and gradually rising to 102-103° F. in the afternoon, with occasional slight chills. There was severe pain in the shoulders and hips, but none deep in the bones. The patient did not have headache, paresthesias, indigestion or tarry stools, symptoms referable to the urinary tract, epistaxis or purpura. The medical and family history taken at the time of admittance was essentially non-contributory.

In December 1949 the patient was admitted to another hospital with sore throat, slight papillary eruption on the chest anteriorly, diminished breath sounds and rales at the right base, a Grade 3 systolic murmur that was loudest in the left third interspace, leukopenia and an enlargement of the liver. Penicillin was given, then chloramphenicol, without effect on the symptoms.

In early January, 1950, the patient was admitted to still another hospital with the same symptoms. The abdomen was distended, the liver edge was three finger-breadths below the right costal margin, and the spleen, which was soft, was two finger-breadths below the left costal margin.

Roentgenograms revealed a low grade inflammatory process at the base of the right lung, enlargement of the liver and suggestion of inflammatory changes in the ileum.

Results of sternal marrow examination on January 9, 1950, were reported as indicating erythroblastic activity, not diagnostic of leukemia. The cell differential count was reported (per cent):

Blasts	3.5	Eosinophils	2.0
Promyelocytes	5.0	Basophils	0.0
Myelocytes	11.5	Lymphocytes	8.5
Metamyelocytes	1.0	Monocytes	2.5
Non-segmented	26.5	Erythroblasts	8.5
Segmented	4.5	Normoblasts	26.5

Leukocytes in the blood between January 9 and February 13 varied from 1,500 to 4,000 per cu. mm. The proportion of lymphocytes never exceeded 2 per cent, and of monocytes varied from 0 to 28 per cent with most counts closer to the lower figure. Ten transfusions maintained the erythrocyte content at 4 million per cu. mm. of blood.

The patient was transferred to the U. S. Naval Hospital at Oakland on February 17, 1950. Possibly pertinent additions to the history at that time were that he had had blood in nasal secretions occasionally since a youth; that about five weeks before admittance there were two episodes of epistaxis, each lasting about five minutes; and that the skin and sclerae had become icteric in December 1949. The body weight was 20 pounds below the 133-pound usual for the patient.

The blood pressure was 92 mm. of mercury systolic and 55 mm. diastolic, the pulse rate 90, and respirations 18 per minute. Slight icterus, a few scattered petechiae and slight cyanosis of the nail beds were noted. The inguinal lymph nodes were slightly enlarged. The left pupil was larger than the right, but both were regular in outline and normally reactive to light. The tongue was beefy red with moderate papillary atrophy. Increased breath sounds were noted at the bases of the lungs. There was tenderness in the left costovertebral angle. The abdomen was slightly distended and shifting dullness and fluid wave were noted. The edge of the liver was palpated four finger-breadths below the right costal margin. There was slight sacral edema but no pretibial pitting. Results of a neurological examination were within normal limits.

The number of erythrocytes per cu. mm. of blood averaged 3 million; of leukocytes 700 to 900, with 1 to 3 monocytes. The proportion of reticulocytes was from 0.2 to 0.6 per cent. Platelets numbered 340,000 per cu. mm. No pathogenic organisms grew on repeated cultures of blood and urine, no ova or parasites were noted in examination of the stools, and specimens of sputum and gastric secretions contained no acid-fast bacilli. Results of agglutination tests were negative for typhoid, paratyphoid and Brucella. No malignant cells were seen in aspirated biliary fluid. Cephalin-cholesterol flocculation was 3+ in 24 hours. The bilirubin content of the serum was 1.36 mg. per 100 cc. by direct and 4.17 mg. by direct reaction. Prothrombin content was normal. Peritoneal fluid (1400 cc. with specific gravity of 1.010 removed March 7, 1950) showed "inflammatory reaction." In x-ray films of the chest and abdomen, adhesions were noted between the lung and the right leaf of the diaphragm laterally, and peritoneal fluid was present. The urine contained 10 to 12 leukocytes and 40 to 50 erythrocytes per high power field. Erythrocyte fragility was slightly diminished. Biopsy specimens of the liver were removed by needle on March 16 and April 19. The architecture of the specimens was slightly distorted. The few veins present were fairly well preserved and there was no surrounding reaction. In the periportal spaces there was necrosis of parenchymal cells, with infiltration of leukocytes which were lymphocytic, polymorphonuclear and plasma cell in type, with a few fibrocytes. Almost no collagenous connective tissue was present. There was no evidence of regeneration of bile ducts or of liver parenchymal cells. The observations were interpreted as consistent with subacute hepatitis.

Course in Hospital: The patient received a high protein diet with protein hydrolysate, vitamins B₁, B₁₂ and K and neostigmine. Blood and salt-free albumin solution were given intravenously. The patient improved subjectively, but there was no objective change other than slight diminution of edema and ascites. The body weight diminished to 93 pounds.

Beginning March 2, corticotropin (ACTH) was administered in a divided daily dose of 40 mg., and beginning April 21 chloramphenicol was given. The temperature became normal and the liver and spleen decreased in size. Chloramphenicol was discontinued May 3, and the following day the dosage of corticotropin was reduced to 20 mg. daily. On May 10 the temperature rose to 101° F. At that time the patient was noted to have a fluid intake of 4500 cc. and an output of 5100 cc. of urine daily. The temperature continued to rise to 105° F. (rectal). The pulse rate rose to 160 and respirations were 36 per minute. The patient died May 11.

AUTOPSY

Macroscopic Observations: Autopsy was performed three hours after death. The skin and sclera were icteric, the

mucous membranes pale. The right inguinal lymph nodes were enlarged.

Thoracic Cavity: The mediastinum was not deviated. The pericardium was thickened. There was 50 cc. of clear amber fluid in the pericardial sac. Except that it was small (200 grams), the heart appeared to be normal. There was 50 cc. of clear fluid in the right pleural cavity. The left lung was tightly bound to the lateral chest wall and to the diaphragm. The right lung weighed 800 grams, the left 750 grams, and filled its pleural cavity. The upper lobes were normal in appearance and consistency. Moderate congestion was noted in the hilar regions bilaterally. Thick tenacious mucus exuded from the cut bronchi. The peritracheal and peribronchial lymph nodes were enlarged.

Abdominal Cavity: The diaphragm extended to the level of the fourth rib bilaterally. There was no fat on the omentum. Approximately 200 cc. of bile-tinged fluid was present. The liver weighed 3200 grams. On the surface of the organ, which was smooth, were many grayish areas, sharply demarcated from the surrounding parenchyma. On section these areas had appearance of an infiltrative process of somewhat myxomatous consistency. The portal system and the extrahepatic and intrahepatic biliary ducts were not grossly abnormal. The spleen weighed 975 grams, and on the external and cut surfaces were grayish-white infiltrations similar to those noted in the liver. The pancreas weighed 200 grams and was apparently normal. Each of the adrenal glands weighed 10 grams. The cortices were somewhat thinned and appear devoid of the usual lipid.

The right kidney weighed 245 grams, the left 215 grams. The cortices were 5 mm. thick but were well demarcated from the medullae. There was slight dilation of the pelvis and calyces. The ureters, bladder and prostate were normal. The testes and epididymes were small, soft and slightly friable.

No abnormalities were noted in the vascular system, in the muscles (except for slight wasting) or in the skeletal system either externally or on sections.

The brain weighed 1460 grams. Moderate engorgement of superficial vessels was noted. No macroscopic abnormalities were observed in examination of sections.

Gross pathologic diagnoses: Chronic lymphatic leukemia with splenomegaly, hepatomegaly, icterus, pulmonary edema and congestion.

Microscopic Observations

Lungs: The alveoli were filled, but not packed, with leukocytes, largely polymorphonuclear. In addition there were macrophages containing small amounts of brown to black pigment and numerous large cells with pale acidophilic cytoplasm and frequent basophilic areas eccentrically located in a perinuclear manner. The nuclei were large and contained large deeply acidophilic, homogeneous, slightly irregular inclusions up to 7 micra in diameter. These were usually single but occasionally a second smaller inclusion was noted. They were sharply demarcated from the nuclear chromatin, although halo formation was not constant. In a few of these cells there were also small brownish black granules not over 1 micron in greatest dimension in the cytoplasm. Many of these cells were free within the alveoli; others in intimate contact with the alveolar walls (Figure 1). Moderate leukocytic infiltration and minimal dilation of the capillaries were noted in the alveolar walls.

Liver: The general architecture was preserved. The capsule was not thickened. About the portal triads were accumulations of leukocytes, largely lymphocytes. There was necrosis of the parenchymal cells and dilation of the sinusoids, most pronounced in the areas about the central veins.

In the areas of necrosis there was infiltration by polymorphonuclear leukocytes, which were also present in increased numbers within the sinusoids. Approximately half of the parenchymal cells were necrosed. The remainder contained little glycogen and frequent golden granules. There was no apparent increase in fibrous tissue. No evidence of regeneration of parenchymal cells or of duct proliferation was noted. The Kupffer cells were not involved. Foamy macrophages were observed within the sinusoids. An occasional liver parenchymal cell, usually at the periphery of one of the zones of necrosis was approximately twice the diameter of the remaining cells with a proportionately enlarged nucleus containing a deeply staining acidophilic inclusion. These cells were similar to those described in the lung.

Spleen: The capsule was moderately thickened. The trabeculae were widely separated and thickened. The arterioles were diminished in number and widely separated. In those present there was thickening of the walls, with occasional obliteration of lumen. The Malpighian corpuscles were small and without germinal centers. Many contained no arterioles. There was increased fibrous tissue within the pulp as well as a light acidophilic groundwork which obliterated many of the sinusoids. Increased blood pigment within the macrophages was noted, particularly at the periphery of the corpuscles. Numerous small old and recent infarcts were present. Crystal violet stained specimens were negative for amyloid.

Kidneys: There was minimal narrowing of the capillary spaces in the glomeruli. The tubules showed minimal atrophy and contained albuminous fluid within the lumina. A single large cell containing an intranuclear inclusion slightly smaller but otherwise identical with those described in the lung, was noted within the lumen of a tubule.

Lymph nodes: There was destruction of the normal architecture. Much of the node was replaced by a homogeneous, lightly acidophilic ground substance similar to that in the spleen. Germinal centers were not noted. The sinusoids, where present, were distorted. In addition to moderately pleomorphic cells of the lymphocytic series, there were a moderate number of large, slightly irregular, lightly acidophilic cells, approximately 50 micra in diameter. No inclusions were noted in them.

Adrenal glands: Except for almost complete absence of cortical lipid, no significant abnormalities were observed.

Vertebral marrow: The fluid was moderately cellular. A few reticulum cells containing indented or even double nuclei were present. The number of megakaryocytes was moderately increased. In the sinusoids there were numerous degenerated cells and masses of homogeneous lightly metachromatic staining material which appeared to be degenerated cells. There were almost no lymphocytes. No inclusions are seen in any marrow cells.

The biopsy material previously taken by needle from the liver was reexamined. In the material obtained April 19 (22 days before death) homogeneous bright acidophilic intranuclear masses up to 7 micra in diameter were observed in many of the parenchymal cells. The larger masses were surrounded by a clear halo separating them from the remainder of the basophilic stained nuclear material. The nuclei and cytoplasm of the latter cells were moderately increased in size and, while intracytoplasmic inclusions were not seen, many contained golden granules within the cytoplasm. In the material obtained March 16, an occasional acidophilic centrally located intranuclear mass up to 3 micra in diameter was noted, but, even in retrospect, such masses could not be identified with certainty as inclusions.

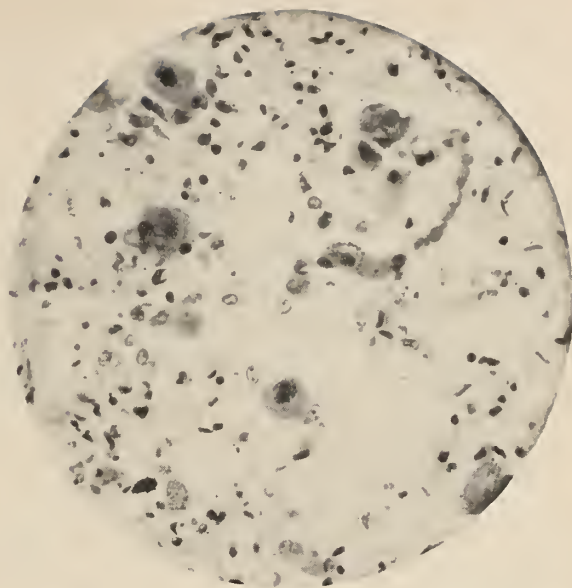


Figure 1.—Intranuclear inclusions in enlarged cells attached to alveolar walls in the lung (x280).

The inflammatory changes in the ileum, noted roentgenographically five months before death but not at autopsy, may indicate the mode of entrance of the virus in adults in view of reports of these inclusions in biopsy material from various sites in the alimentary tract.²

Von Glahn and Pappenheimer's⁷ review of the literature with regard to this condition has not been appreciably altered. First considered as protozoan parasites or saprophytes, later as an alteration in cells due to various diseases, these inclusions are now generally considered due to infection by a specific virus. Similar rodent infections may be transmitted by intracerebral inoculation, but species specificity is, to date, absolute. All attempts at animal or yolk sac passage of human virus have failed.

Farber and Wolbach¹ in a series of 183 autopsies on infants who had died of various causes demonstrated the presence of such inclusions within the duct epithelium of the salivary glands of 12 per cent of the subjects. They presented the view that, although due to a specific virus, which may be transmitted transplacentally, these inclusions are not related to illness or death. McMillan,³ however, expressed belief that the virus causes a disease which is benign unless it involves the lungs where it may give rise to pneumonitis which, if not the cause of death, at least appears to be a definite contributing factor.

DIFFERENTIAL DIAGNOSIS

The large size of the cells whose nuclei contain these spectacular intranuclear inclusions generally occurring in the salivary glands, lungs, kidneys, intestines and spleen, would appear to make oversight almost impossible. In addition, smaller and frequently overlooked cytoplasmic inclusions are present in many of these same cells, apparently developing about seven days after the appearance of the intranuclear inclusions.³ The intranuclear inclusions are bright acidophilic when stained by hematoxylin-eosin, red when Masson's trichrome is used, and black when the staining material is iron hematoxylin. They do not take up McManus stain. The cytoplasmic inclusions are variously

described as being generally 1 micron or from 2 to 4 micra in diameter. They are basophilic and not vacuolated.

Brief notes on the four other recorded cases of generalized cytomegalic inclusions in adults follow:

Case of Von Glahn and Pappenheimer⁷

A 36-year-old white man had non-amebic liver abscess, and fever for a period of three and one-half weeks. The autopsy diagnosis was abscess of the liver, ulcerative colitis (cecum) with hemorrhage, suppurative pleurisy and sclerosis of the pulmonary venules. The intranuclear inclusions were noted in cells in capillaries and connective tissue throughout the wall of the liver abscess, in the ulcers in the cecum, in the lining cells of some of the alveoli and within capillaries in the adrenal glands. These authors did not note intracytoplasmic inclusions nor did they note cytoplasmic degenerative changes other than the occasional fat globules.

Case of McMillan³

A 60-year-old Japanese woman, 32 years a resident of Canada, died of pneumonitis. The patient also had had vitamin deficiency which had responded rapidly to therapy. Cytoplasmic and nuclear inclusions were noted in the cells lining the alveoli of the lungs and in the zona reticularis of the adrenal cortex.

Case of Reinhard and co-workers⁵

The case was reported incidentally in a discussion of the chemotherapy of malignant disease. The patient was a 49-year-old man with subleukemic lymphatic leukemia who had been treated by amino-an-fol, a folic acid antagonist. At autopsy no remainder of leukemia could be identified but foci of giant cells containing the typical intranuclear inclusions were observed in the lungs, spleen and liver.

Case of Wyatt and co-workers⁸

A 27-year-old woman died after seven years of illness that was characterized by aplastic anemia and atypical subleukemic myeloid leukemia. Hypoplastic bone marrow and transfusional siderosis were noted at autopsy. The liver and pancreas were large, firm and dark brown. Inclusions were noted in the liver, lungs, adrenal glands and pancreas. However, the lungs showed no inflammatory reaction. The diagnosis of leukemia was not substantiated by observation of the condition of the marrow at autopsy. The possibility that the virus was transmitted by transfusion to an already debilitated patient and thus became generalized was considered.

That two of the patients in the four cases had leukemia and another had liver damage is of interest with relation to the findings in the present case. With these exceptions, there appear to be no common factors in the clinical courses or pathologic findings.

The majority of all cases, including those in stillborn babies and infants, have been reported from the St. Louis area. This is regarded as a manifestation of particular interest in the condition by pathologists in that area.

SUMMARY

Cytomegalic inclusions were found in the lungs, liver and kidneys of an adult who died of malignant lymphoma.

Undiscovered until examination of the autopsy material, typical intranuclear inclusions were present in material obtained at liver biopsy 22 days prior to death, although inclusions were absent or equivocal in similar material obtained 56 days prior to death.

There was roentgenographic evidence of ileitis four months prior to death. (Gastrointestinal tract lesions containing similar inclusions have been reported in living adults.)

This is the fifth reported case of generalized cytomegalic inclusion disease in an adult and is the third in which there were bizarre blood changes that were diagnosed during life as leukemia. Blood dyscrasias and liver damage are also frequently observed in generalized infections by the salivary gland virus in infants.

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EDITORIAL

Veterans and Politics

AMERICA has long recognized the responsibility of government to compensate those persons who are called into military service in time of need. American standards of pay, allowances, leave and other perquisites for military personnel have long been immeasurably higher than those of other countries. Living standards are likewise higher and, in general, everything possible is done to make military service no more onerous than it must be.

Not only is the soldier, sailor or marine well cared for during his term of service; he is well provided for on his return to civilian life. Severance allowances take care of his immediate cash needs; special laws have been passed to allow him to acquire an education at government expense. He may purchase surplus government equipment and buy a home on a priority basis; he makes a lower down payment and receives more government assistance in the purchase of a home than does the ordinary citizen.

All this comes about whether the ex-serviceman has served for 30 days or 30 years. As a veteran, combat or not, he falls heir to the many advantages which a kindly and appreciative government has provided as restitution to him for time spent serving his country.

Since the close of World War I a large part of this governmental compensation has come in the form of medical benefits. The veteran with a service-connected disability has long been entitled to medical and hospital care under the program of the Veterans Administration. Since the close of World War II, the veteran in many states has been allowed to secure his medical care in his own home town from his own physician, an arrangement which eliminates the need to travel to Veterans Administration hospitals and to remain away from his family. A less obvious but quite real benefit is that of avoidance of costly stay in a VA hospital, which

must be met out of the taxes the veteran and his fellow citizens pay.

California has been one of the leaders in providing its veterans with home-town medical care. A contract between the Veterans Administration and California Physicians' Service has operated with amazing smoothness and efficiency for several years, with satisfaction to veterans, to physicians and to the government.

When the Congress, last October, saw fit to reduce the overall budget for the Veterans Administration by \$40,000,000, the VA applied about three-fourths of the reduction to its medical program. A part of this reduction was made in the home-town medical care plan, with the result that the California program was reduced by about 30 per cent.

With this cut, many of the 11,000 California veterans receiving treatment under the home-town program found their care reduced. Some of them found that their three visits weekly or monthly to the doctor were cut to two. Others continued their full treatment and paid the difference in fees themselves. In other cases the doctors donated their services for the visits eliminated under this economy program.

Investigation of this situation has developed the fact that there has apparently been an application of economy in the direction of producing a public protest, rather than in a way to eliminate expendable services. As one California Congressman wrote, ". . . unfortunately, when Congress attempts to reduce expenditures and balance the budget, some administrative agencies apply the reductions where they will produce the loudest public squawk, not where they will eliminate useless positions and services."

The California Medical Association, in common with other medical organizations, has long supported the policy of providing adequately for the military

veteran who has incurred a disability in the course of his military service. The Association has long decried the policy of extending *ad infinitum* the numerous governmental handouts to all veterans and their dependents. The serviceman wounded in battle or otherwise disabled in service is entitled to all the benefits of the workman injured in the course of his employment and granted care and restitution for his injury. On the other hand, the fact that a citizen was drafted and wore his country's uniform for 30 days should not entitle him to benefits out of all proportion to the contribution he has made to his country.

In the present instance, it is obvious that an economy-minded government will seek to eliminate waste in the Veterans Administration and in all

government departments. If the various departments apply their economy hatchets to essential services and produce a public outcry, no benefit will result from the overall economy movement. On the other hand, if the government agencies seek out waste and inefficiency, we may look for a continuation of needed services and a tax reduction simultaneously.

The veteran with service-connected disability needs and should have medical care. The home-town program is supplying that care with efficiency and economy. Let us hope that this one department of the VA may be restored to its rightful place in the program and that fiscal savings be effected in other departments not bearing so closely on the lives and the health of those disabled in the service of the country.

LETTERS to the Editor . . .

Carcinogenic Cigarettes

SINCE it is difficult to obtain convincing statistical evidence for or against the alleged carcinogenic action of cigarette smoke, recent investigators have turned to animal experimentation. Lorenz and his associates, for example, exposed strain "A" mice to tobacco smoke in an especially designed smoking machine for 28 to 250 days. Strain "A" mice have an hereditary tendency to develop lung tumors. They reported that no lung tumors were induced by the tobacco smoke, the number of pulmonary neoplasms being the same in the smoked and control mice.

Recently Essenberg* of the Department of Anatomy, Chicago Medical School, repeated these experiments, subjecting strain "A" mice to a more prolonged exposure to cigarette smoke. He devised a rotary cigarette carriage holding 12 cigarettes (brand name not given). An electric cigarette lighter lighted one cigarette per hour. A vacuum pump created suction just sufficient to burn the cigarette and circulate the smoke and fresh air through the chambers containing the experimental and control animals. The experimental chamber was filled with cigarette smoke for a period of about nine minutes

per hour during a 12-hour day for a period of one year.

In a typical test, a group of 36 strain "A" mice was placed in the smoke chamber and the same number in the control chamber. The sexes were equally divided in both chambers. Records of the weight increase and reproductive capacity were kept of all animals. At the end of one year the lungs of each animal were sectioned serially.

In the control group 59.4 per cent of the lungs showed spontaneous tumors, papillary adenocarcinoma being the most common. In the smoked mice 91.3 per cent showed pulmonary neoplasms. The conclusion was drawn that repeated inhalation of cigarette smoke for a period of one year increased by about 50 per cent the tendency of strain "A" mice to develop lung tumors. Whether or not cigarette smoke would have any effect on non-carcinophilic mice has not been determined.

Other deleterious effects were noted in the smoked mice, degenerative changes being recorded in the endocrine glands, kidney, liver, and organs of reproduction. Weight records showed that the smoked mice grew more slowly and failed to attain the full weight of the controls. No young were obtained from the smoked mice. The control mice reproduced freely. Atrophy of the reproductive function was thus one of the outstanding deleterious effects.

W. H. MANWARING, M.D.
Palo Alto, Calif.

*Essenberg, J. M.: Cigarette Smoke and the Incidence of Primary Neoplasm of the Lungs in the Albino Mouse, *Science*, 116:561, Nov. 21, 1952.

California MEDICAL ASSOCIATION

NOTICES & REPORTS

Executive Committee Minutes

Tentative Draft: Minutes of the 236th Meeting of the Executive Committee, San Francisco, February 1, 1953.

The meeting was called to order by Chairman Lum in Room 221 of the St. Francis Hotel, San Francisco, at 1:15 p.m., Sunday, February 1, 1953.

Roll Call:

Present were President-Elect Green, Council Chairman Shipman, Auditing Committee Chairman Lum, Secretary Daniels and Editor Wilbur. Absent for cause, President Alesen and Speaker Charnock.

A quorum present and acting.

Present by invitation were Executive Secretary Hunton, Mr. George Smith of legal counsel, Councilor Arthur A. Kirchner, Mr. Charles O. Finley, insurance broker, and Mr. Patrick McIntyre, representing Continental Casualty Co.

1. Proposed Group Accident and Health Insurance:

Doctor Kirchner and Messrs. Finley and McIntyre discussed the features of a proposed group accident and health insurance coverage for members of the Association. It was pointed out that with a 50 per cent participation of eligible members, all applicants during the charter enrollment period would be accepted regardless of physical history; thereafter, new members of the Association would be enrolled on the same basis but new applicants who had been eligible to enroll in the charter period would be accepted only on the basis of a medical screening.

Discussion was held as to the possibility of extending the period of disability benefits from two to five years for disability arising from illness and Mr. Finley stated this could be done. Benefits for disability arising from accidents would be for an indefinite period. It was pointed out that a favorable loss experience would result in an increase in benefits.

The Association would be required, under state

law, to serve as the collecting agency and would furnish the mailing list of present and new members. An enrollment fee would cover the Association's expenses.

On motion duly made and seconded, it was voted to submit this proposal to an independent insurance analyst and to explore the possibility of alternative offerings.

2. Central Office Lease:

On motion duly made and seconded, it was voted to confirm an earlier telephone vote approving the signing of a five-year lease on enlarged office quarters at 450 Sutter Street, San Francisco.

3. Physician Placement:

A suggestion from Councilor Carey, calling for a review of hospital interns and residents as potential physicians for rural communities was discussed and on motion duly made and seconded, the executive secretary was instructed to follow up on this idea and to add the county medical societies as a further source of names of physicians who might serve in rural areas.

LEWIS A. ALESEN, M.D. President
JOHN W. GREEN, M.D. President-Elect
DONALD A. CHARNOCK, M.D. Speaker
WILBUR BAILEY, M.D. Vice-Speaker
SIDNEY J. SHIPMAN, M.D. Council Chairman
ALBERT C. DANIELS, M.D. Secretary-Treasurer
DONALD D. LUM, M.D. Chairman, Executive Committee
DWIGHT L. WILBUR, M.D. Editor
JOHN HUNTON Executive Secretary
General Office, 450 Sutter Street, San Francisco 8
ED CLANCY Director of Public Relations
Southern California Office:
417 South Hill Street, Los Angeles 13 • Phone MAdison 8863

4. *Additional Delegate to A.M.A.:*

Mr. Hunton reported that the Association had received confirmation of an additional delegate to the American Medical Association, effective with the 1953 sessions. An election to this office, subject to official confirmation of the post by the A.M.A., was held at the 1952 Interim Session of the House of Delegates.

5. *State Department of Public Health:*

A request from the State Department of Public Health, asking that the Committee on Public Health and Public Agencies be authorized to seek additional

consultation on specific problems, was discussed. It was pointed out that the coming distribution of immune globulin would call for special knowledge of the problems involved. On motion duly made and seconded, it was voted to authorize the committee to seek additional counsel on the problem of immune globulin distribution.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 4:45 p.m.

DONALD D. LUM, M.D., *Chairman*

ALBERT C. DANIELS, M.D., *Secretary*

In Memoriam

BRAY, EULYS W. Died in Altadena, January 27, 1953, aged 43. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1938. Licensed in California in 1938. Dr. Bray was a member of the Stanislaus County Medical Society, the California Medical Association, and the American Medical Association.



CIERI, JOSEPH D. Died in Oakland, January 26, 1953, aged 51, of coronary occlusion. Graduate of the Washington University School of Medicine, St. Louis, Mo., 1931. Licensed in California in 1942. Dr. Cieri was a member of the Alameda-Contra Costa Medical Association, the California Medical Association, and the American Medical Association.



CREASE, FREDERICK J. Died in Bakersfield, November 19, 1952, aged 84, of myocarditis, gangrene of the left foot, and arteriosclerosis. Graduate of the University of the South Medical Department, Sewanee, Tenn., 1898. Licensed in California in 1901. Dr. Crease was a retired member of the Kern County Medical Society, and the California Medical Association.



LIVINGSTON, WILLIAM R. Died in Oxnard, December 18, 1952, aged 82. Graduate of the University of Illinois College of Medicine, Chicago, 1893. Licensed in California in 1899. Dr. Livingston was a retired member of the Ventura County Medical Society, and the California Medical Association.

LURIE, SOPHIE A. Died in Los Angeles, January 20, 1953, aged 71, of carcinoma of the stomach. Graduate of Kiev Medical Institute, Kiev, Ukrainian S.S.R., 1913. Licensed in California in 1927. Dr. Lurie was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



MCGEE, R. PROCTOR. Died in Los Angeles, January 14, 1953, aged 75. Graduate of the Denver College of Physicians and Surgeons, Colorado, 1903. Licensed in California in 1925. Dr. McGee was a retired member of the Los Angeles County Medical Association, and the California Medical Association.



TURNER, JAMES H. Died in Lynwood, January 21, 1953, aged 74, of congestive heart failure. Graduate of Tufts College Medical School, Boston, Mass., 1903. Licensed in California in 1914. Dr. Turner was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



WILLISON, EUGENE E. Died in Merced, January 24, 1953, aged 54, of coronary artery disease. Graduate of the Indiana University School of Medicine, Bloomington-Indianapolis, 1927. Licensed in California in 1937. Dr. Willison was a member of the Merced County Medical Society, the California Medical Association, and the American Medical Association.

NEWS & NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

Examinations for certification by the **American Board of Preventive Medicine** will be held April 23, 24 and 25 at the School of Public Health, University of California, Berkeley. Examinations may be taken later in the year at New York City at the time of the annual meeting of the American Public Health Association, November 7, 8 and 9. Persons wishing to take the examinations are required to notify the board, 615 North Wolfe Street, Baltimore.

LOS ANGELES

A two-day sectional meeting of the **American College of Surgeons**, in joint sessions with the Southern California chapter of the college, will be held at the Hotel Statler, Los Angeles, on March 30 and 31. This is the first sectional meeting in Los Angeles since 1946. Dr. Ewing L. Turner, assistant clinical professor of surgery, University of California School of Medicine, Los Angeles, is chairman of the local committee on arrangements. Dr. Clarence E. Rees of San Diego is president of the Southern California chapter of the college. Of special interest at these meetings will be ophthalmological and otolaryngological sessions, in addition to those on general surgery, the announcement of the meeting said.

* * *

The **Metropolitan Dermatological Society** of Los Angeles has elected the following officers for the year 1953: President, Dr. Stanton B. May, Glendale; vice-president, Dr. Fred F. Feldman, Beverly Hills; secretary-treasurer, Dr. Irving A. Lewy, Montebello.

* * *

Dr. John D. Camp of Los Angeles recently was elected president of the American College of Radiology, succeeding Dr. John S. Bouslog of Denver. **Dr. Earl R. Miller** of San Francisco was elected to the board of chancellors of the college.

* * *

The **Third Biennial Western Conference on Anesthesiology** will be held at the Ambassador Hotel, April 8, 9 and 10.

The conference is sponsored by the California Society of Anesthesiologists and the Northwest Society of Anesthesiologists. As in the preceding two conferences, the program has been constructed about one main subject—this year, The Nervous System.

* * *

More than 2,000 industrial physicians, dentists, nurses and hygienists will meet in Los Angeles April 18 to 24 for the 1953 National Industrial Health Conference.

Members of six national organizations will attend the sessions: American Conference of Government Industrial Hygienists, United States Navy Industrial Health Organization, American Association of Industrial Dentists, American

Industrial Hygiene Association, Industrial Medical Association, and the American Association of Industrial Nurses.

This will be the first meeting of the groups west of the Mississippi; previous sessions have been held in the more highly industrialized sections of the East and Mid-West.

Subjects will range from technical discussions of specific industrial health problems to such as the air pollution prevention and control problems in urban industrial centers.

Scores of widely recognized authorities from all parts of the country will participate in the program.

* * *

Elected to office at a recent meeting of the newly organized **Southern California Psychiatric Society**, a district branch of the American Psychiatric Association, were: President, Dr. Mathew Ross; president-elect, Dr. Charles W. Tidd; secretary, Dr. Jerome M. Kummer; treasurer, Dr. Leo Rangell.

Councilors, for terms expiring 1956: Drs. Allen J. Enelow, Samuel Futterman, Jack B. Lomas, and Harry Nierenberg; for terms expiring 1955, Drs. Ralph R. Greenson, Judd Marmor, Robert E. Wyers, and Eugene Ziskind; for terms expiring 1954, Drs. Roberta Crutcher, Norman A. Levy, Clarence W. Olsen, and Eugene Pumpian-Mindlin.

SAN FRANCISCO

Dr. William A. Reilly, director of the Radioisotope Unit at Fort Miley in San Francisco, has been appointed clinical professor of pediatrics at the University of California.

* * *

Opening of San Francisco's newest **arthritis clinic**—at St. Mary's Hospital—was announced recently by Harold W. Knowles, president of the San Francisco Arthritis and Rheumatism Foundation. The new clinic is the fifth of its kind in San Francisco. The others are at the University of California Hospital, Stanford Hospital, San Francisco Polyclinic, and Mount Zion Hospital. All of them are benefited through the Arthritis and Rheumatism Foundation.

GENERAL

The American National Red Cross has announced that upon request made last November by the Office of Defense Mobilization, it will expand its blood collections "to produce as much **gamma globulin** for all purposes as blood processing laboratories can turn out." The announcement called attention to recent experiments indicating that gamma globulin protects against the paralyzing effect of poliomyelitis for a period of about one to five weeks. The Red Cross said it will not allocate or distribute the globulin.

* * *

The **Pacific Dermatologic Association** will hold its 1953 meeting at the Olympic Hotel and University of Washington in Seattle, Wash., on July 9 and 10, 1953. Dr. Earl Osborne, of Buffalo, N. Y., will be the principal guest speaker and will lead symposia on "Cutaneous Malignancy" and on "Industrial Dermatoses." Other features will include luncheon round table discussion groups, a clinical meeting and a histopathologic seminar. Non-member dermatologists are welcome to attend the meeting.

* * *

The seventh annual **Rocky Mountain Cancer Conference** will be held in Denver on July 8 and 9. As in previous years there will be eight outstanding guest speakers, and on

the first evening a banquet and entertainment for physicians and their ladies. There is no registration fee for the conference.

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The 1953 meeting of the American Goiter Association will be held in the Drake Hotel, Chicago, May 7, 8 and 9, 1953. The program for the three-day meeting will consist of papers and discussions dealing with goiter and other diseases of the thyroid gland.

POSTGRADUATE EDUCATION NOTICES

MEDICAL EXTENSION UNIVERSITY OF CALIFORNIA

Postgraduate Courses for 1953

Symposia on Psychosomatic Medicine, Wednesday afternoons and evenings, March 11, 18, 25. Fee to be announced. Langley Porter Clinic, San Francisco.

Diagnostic Radiology, April 6, 7, 8, at Franklin Hospital, San Francisco. Fee to be announced.

Pediatric Conference, June 22 through 26. Fee to be announced. Medical Center.

Conference on General Surgery, June 15 through 19. Fee \$75.00. Medical Center.

Obstetrical and Gynecological Conference, September 2, 3, 4. Place and fee to be announced.

Ophthalmology (for specialists), September 14 through 19. Fee \$75.00. Medical Center.

Medicine for General Practitioners, September through November. East Oakland Hospital. Fee \$50.00.

Evening Lectures in Medicine, September through November. Fee \$50.00. Mills Memorial Hospital, San Mateo (probably).

Contact: All inquiries to be addressed to Stacy R. Mettler, M.D., Professor of Medicine, Head of Postgraduate Instruction, Medical Extension, University of California Medical Center, San Francisco 22.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

The Stanford University School of Medicine will offer the annual postgraduate conference in Clinical Ophthalmology from March 23 through 27, 1953. The program this year will be devoted to Ophthalmic Surgery.

Registration will be open to physicians who limit their practice to the treatment of diseases of the eye or eye, ear, nose and throat. In order to allow free discussion by members of the conference, registration will be limited to thirty physicians.

Instructors will be Dr. A. Edward Maumenee, Dr. Dohrmann K. Pischel, Dr. Jerome W. Bettman, Dr. Max Fine, Dr. Earle H. McBain, and Dr. Arthur J. Jampolsky.

Cardiology—Date: June 15-19. Fee: \$75.00.

General Medicine—Date: June 15-19. Fee: \$75.00.

Surgery of Trauma—Date: June 22-26. Fee: \$75.00.

General Surgery—Date: June 22-26. Fee: \$75.00.

Programs and further information may be obtained from the Office of the Dean, Stanford University School of Medicine, 2398 Sacramento Street, San Francisco 15, California.

UNIVERSITY OF SOUTHERN CALIFORNIA SCHOOL OF MEDICINE

Division of Medical Extension Education

No. 882—Essential Physics in Radiology

Dates: March 9, 1953, through April 10, 1953—Los Angeles County Hospital; April 13, 1953 through May 25, 1953—Cedars of Lebanon Hospital.

Tuition: \$55.00.

Speakers: Robert E. Pugh, Jr., F.A.C.R. (Assoc.), Henry L. Jaffe, M.D.

Contact: Dr. Gordon E. Goodhart, Director, Medical Extension Education, 1200 North State Street, Los Angeles 33, Calif., CApital 4195.

INFORMATION

Nursing Homes:

An Analysis of the Types of Patients and the Nursing Services

BERNICE HOTCHKISS, R.N., Hospital Nursing Consultant, Bureau of Hospitals, California State Department of Public Health

INTRODUCTION

THE BUREAU OF HOSPITALS of the California State Department of Public Health in the administration of the hospital licensing program has felt a need for more information regarding the services which are available in the nursing homes throughout the state as well as the types of patients which are being cared for in such facilities.

Much is being said about chronic care accommodations and the inadequacies of the present facilities. Hospitals are said to be overcrowded because of the increase of chronic diseases brought about by the extended life span of today's population. It is well known that many individuals cannot be cared for in their homes and are finding their way into "nursing homes." The many inquiries coming to the Bureau of Hospitals are evidence that need exists in many communities for this type of facility.

A study already completed by the State Department of Public Health* revealed that almost 9,000 beds are licensed in the nursing homes of California. These beds are found in 450 nursing homes located throughout the state. That study further revealed that while most of these facilities are relatively safe and are capable of providing adequate facilities for patient care, there are many deficiencies which do exist and correction of which would result in improved patient care more in harmony with what is advocated in the care of the chronically ill.

The following study has as its main objectives the determination of the types of patients being accommodated, the utilization of beds in nursing homes as determined by occupancy, and the nursing services which are being rendered in these nursing homes.

This information was secured from results of a questionnaire completed by field personnel of the Bureau of Hospitals at the time of their regular

visits to the nursing homes. A three-month period was used to secure this material and the questionnaire was filled out on all nursing homes visited by the field staff. It can be assumed that the sampling secured by this method is fairly typical of all facilities throughout the state.

One hundred sixty-eight nursing homes, representing a total of 3,652 licensed beds, or 42 per cent of all nursing home beds in the state, are included in the study.

Two thousand eight hundred sixty-five persons were housed as patients in these homes at the time the questionnaire was completed.

CAPACITY

The capacity of the nursing home included in this sampling ranged from 3 beds to 88 beds. The following table shows the range of capacity as well as the number and percentage of nursing homes in each range:

Capacity	Number of Nursing Homes	Percentage of Nursing Homes
2 to 10 beds.....	51	30%
11 to 25 beds.....	52	31%
26 to 50 beds.....	58	35%
51+ beds.....	7	4%

For purposes of this study, the above classification of range of capacity has been retained. It has been expressed by some authorities that the size of the facility has a direct bearing on the type of care which is provided as well as the quality of service which is available. Apparent differences in this report will be pointed out.

The range of capacity in the sampling is not typical of all facilities licensed by the State Department of Public Health. Actually only 26 per cent of the total number of nursing homes have more than 25 beds; however, 39 per cent of the homes in the sampling have bed capacities greater than 25 beds. Also, 43 per cent of the total facilities have capacities of fewer than 11 beds, but the study included only 30 per cent in this range. While this discrepancy does not alter the general conclusions in this study, it should be kept in mind where distinctive differences appear between the large and small facilities.

OCCUPANCY

Average occupancy of the 168 nursing homes included in the study was 83 per cent, with a median of 86 per cent. Of the total number of facilities in this study, 99 were operating with occupancies greater than 75 per cent. Only 12 were operating with occupancies less than 50 per cent.

The following breakdown serves to show that the size of the facility has a direct relation to its occupancy, the small nursing home tending to operate at a higher occupancy than the large one.

Reprinted from *California's Health*, November 30, 1952.
* See "Nursing, Convalescent, and Rest Homes in California," Bernice Hotchkiss, R.N., *California's Health*, March 15, 1952.

The small nursing homes of 2- to 10-bed capacity were operating with an average of 92 per cent occupancy. Of the 51 homes in this category, 22 facilities, or 43 per cent, were operating at a 100 per cent occupancy.

In the 11- to 25-bed class, the facilities averaged 87 per cent occupancy. Sixteen nursing homes, or 36 per cent of the 52 nursing homes, were operating at full capacity.

In the nursing homes with capacity beyond 26 beds, the occupancy was 73 per cent, with only seven of 65 facilities operating at 100 per cent occupancy.

These high occupancy figures substantiate the idea that a great need exists for this type of hospital facility. These nursing homes are meeting a definite need and are providing a type of care which apparently is not available or possible in the home or the general hospital. On the basis of this sampling, it can be assumed that about 7,500 persons are being cared for by this category of hospitals in the state.

The higher rate of occupancy in small nursing homes in comparison with the larger is significant, and clearly illustrates the existing demand for this type of facility. There are probably many reasons why these homes were almost fully occupied. It should be remembered that almost every nursing home, whether large or small, is attempting to operate for profit. The small nursing home must meet the same minimum standards for state licensure as the large one. This usually entails a rather large expenditure of money in order to comply with physical requirements. As a result, in order to realize a profit, the small nursing home must operate with all beds occupied. In these small facilities, the operating cost is substantially the same whether all beds are occupied or not. Consequently, greater conscious efforts are probably made by the operator to keep the beds full. There is also the contention that the chronically ill patient in the small nursing home can enjoy more of a home environment than is possible in the larger, institutional type of facility.

TYPE OF PATIENTS

In an effort to determine the amount and type of personnel necessary for the care of these patients, some information on the physical status of the patient was obtained. While it is not always true that the bed patient requires more care than the ambulatory patient, it does give some idea as to the attention and care which is usually required. Size of the facility apparently does not affect the types of patients which are accepted for care so the breakdown by size will not be considered in this section of the report.

Of the 2,865 patients in the 168 nursing homes, 5 per cent required no specific care. The services which were provided for them consisted of board, room,

and minimum supervision. (These patients are ambulatory, are able to carry on their ordinary routine without assistance and need only the protection of having a responsible person on hand if necessary.) It would appear that this small percentage of persons has been financially able to select this type of facility for everyday living, and these persons probably experience some feeling of security, knowing that residence can be retained in case of illness.

Thirty-six per cent, or 917 patients, were ambulatory but required some assistance and attention. Such assistance may have consisted of help in such daily tasks as bathing, walking or dressing, or it may have meant providing therapeutic diets, administering medications, dressings or treatments. Such attention and care may be necessitated by physical infirmity and senility, by chronic disease, or by convalescence from acute illness. While this type of patient usually does not require as much care as bed patients, some patients in this category do require skilled personnel for medical and nursing care and supervision.

While 59 per cent of the patients included in the study were classified as bed patients, 23 per cent were declared to be absolute bed patients while the remaining 36 per cent could get out of bed or be assisted out of bed at least every day. The patients designated as strict bed patients were unable to be out of bed because of physicians' orders, because of disease or physical infirmity, or because of lack of encouragement and assistance by the staff in the nursing home. Bed patients, whether absolute or not, require extensive and skillful nursing care. Even though a patient is allowed out of bed for a few minutes or a few hours every day, skillful handling and close supervision are usually required. The procedure of helping a patient get out of bed and into a chair often requires as much skillful handling and consumes more time than if the patient were left in bed. In fact, some of the homes reporting a high percentage of strictly bed patients, could probably reduce this percentage if efforts were made to get patients out of bed. Lack of personnel and lack of knowledge of modern care of the chronically ill is probably responsible for this high percentage.

It was noted that 22 nursing homes had no ambulatory patients at all, but listed all their patients as bed patients with some of those bed patients being able to be up in a chair every day.

Thirty-two nursing homes declared no absolute bed patients. Operators claimed that all their patients were either ambulatory or could be out of bed with or without assistance.

Fourteen facilities declared all patients to be ambulatory. However, all 14 had patients who required some type of medical or nursing care.

The study shows that 44 per cent of all patients are able to take tub baths, the remainder requiring bed baths. This means that while more than half are given bed baths, some of those being given tub baths are actually bed patients and require attention and skill in the procedure. It is well recognized that in every hospital much time is consumed in the task of bathing patients. From the number of bed baths reported, it was apparent that one-third of the nursing homes were giving their patients bed baths daily. The questionnaire was not intended to get information for the purpose of evaluating adequacy of nursing care, but instead it attempted to get some data which would determine the amount of time consumed in these tasks.

Twenty per cent of the total number of patients were on special therapeutic diets. Special point was made not to include in this percentage diets which were special only because of the patient's inability to chew, swallow, etc. While the special diets in a nursing home are usually relatively simple, a basic knowledge of nutrition and nutritional needs of the individual patient is required in order that physicians' orders be complied with and adequate diets be provided. There is probably need for much to be done in the field of nutrition for patients in these homes. It is felt that many operators either do not realize what the basic nutritional needs of the aged are, or are more concerned with providing a cheap diet than with having the food served meet nutritional needs.

Thirty per cent of the patients required assistance with eating. In some cases this meant actually feeding the patient because he was too ill, needed encouragement, or was not physically able to feed himself. In other cases, it meant only assisting the patient by cutting meat, buttering bread, etc., so that the patient would be able to feed himself.

Two per cent of the patients had pressure sores. The patients with pressure sores were centralized in 46 nursing homes. One home reported that it had four patients with pressure sores, totaling 15 per cent of its patients. Others for the most part reported single patients in their facilities with this affliction.

An average of 31 per cent of all patients in nursing homes were declared to be incontinent, having no control of urine or feces. This is rather a startling figure and presents a nursing problem of great magnitude. It is well known that incontinence is a common accompaniment of old age and likely to occur among such persons. With expert nursing care and more adequate staffing, it is felt that many of these oldsters would not be incontinent and this percentage might be reduced.

About 68 per cent of the patients were getting some type of medication. The most common mode of administration was by mouth, although hypodermic, intramuscular and intravenous methods were employed in many facilities. Only five nursing homes reported that no patients were receiving medication. Fifty-one of the 168 facilities reported that they had given no hypodermics during the preceding week.

In five of the 168 homes, no tasks which can be considered nursing procedures were being performed; in 18, the only procedure was bed baths; in 15, only bed baths and medications; and in 20, bed baths, medications, and enemas comprised the total skilled nursing procedures.

Except for bed baths and medications, the most common nursing procedure being performed in nursing homes was the administration of enemas. Only 37 homes reported that no enemas had been given during the preceding week. The frequency of this procedure is necessitated by the type of elderly patient likely to be found in the nursing home.

Less than half of the nursing homes had been required to apply surgical dressings during the preceding week. Even in these, the questionnaire revealed that usually only one patient in each home was getting regular dressings. It can be assumed that this procedure is not often employed.

Irrigations (eye, throat, bladder) had been performed in 38 nursing homes. This seems unusually low when it is realized that many elderly male patients frequently have in-dwelling catheters which necessitate bladder irrigations.

Intravenous injections, usually medications, had been given in 19 nursing homes during the preceding week.

The use of the heat lamp for treatment of various ailments was common in 29 nursing homes.

Massage, oxygen therapy, diathermy, physiotherapy, inhalation therapy, and application of compresses were other procedures which were listed as less frequently employed in the nursing homes included in the questionnaire.

CONCLUSION

Our nursing homes, in addition to providing protection and custodial care are providing to some extent a certain type of medical and nursing care. The amount of care varies, in that some nursing homes are staffed and equipped to accept patients requiring very extensive and skilled care while others are not able to do so. The need for this type of facility is evidenced by the high occupancy of many of these nursing homes.

As a result of the information gathered for this study, the following nursing procedures appear necessary to provide the medical and nursing services

which should be available in today's nursing homes. It is quite possible and even desirable that other more complex procedures be performed in certain cases where the staff and equipment are available. However, the following procedures appear to be necessary to provide the necessary minimum services.

1. Personal care of patient

- a. Making patient comfortable
- b. Knowledge of supportive measures to be applied for patient's comfort and happiness
- c. Giving bed baths
- d. Assisting with tub baths
- e. Assisting patients in and out of bed
- f. Care of incontinent patients
- g. Skin care, and nail care
 - (1) Prevention of pressure sores
 - (2) Treatment of pressure sores
- h. Hair shampoos (in and out of bed)
- i. Care after death

2. Medication

- a. Techniques of administration
 - (1) Hypodermic
 - (2) Intramuscular
 - (3) Oral
 - (4) Instillation of eye and nose drops
- b. Knowledge
 - (1) Usual dosage
 - (2) Signs of overdosage
 - (3) Methods of administration
 - (4) Effect and reaction

3. Nutrition

- a. Knowledge of nutritional needs
- b. Ability to prepare special diets
- c. Feeding patients

4. Charting—patients' records

5. Recognition, observation and interpretation of symptoms

6. Temperature, pulse, respiration and blood pressure

- a. Techniques
- b. Interpretation
- c. Recording

7. Aseptic technique

- a. Knowledge
- b. Methods of applying sterile dressings

8. Compresses

- a. Techniques
- b. Indications, contraindications
- c. Application of ice bags, hot water bottles, etc.

9. Catheterizations

- a. Techniques
- b. Contraindications

10. Douches

11. Enemas

- a. Types
- b. Techniques
- c. Contraindications

12. Application of heat lamp



THE PHYSICIAN'S *Bookshelf*

NUTRITION AND DIET IN HEALTH AND DISEASE—6th Edition. James S. McLester, M.D., Professor of Medicine Emeritus, University of Alabama; and William J. Darby, M.D., Ph.D., Professor of Biochemistry and Director of the Division of Nutrition, Vanderbilt University. W. B. Saunders Company, Philadelphia, 1952. 710 pages, 14 figures, and 145 tables, \$10.00.

McLester and Darby have written a most important textbook of applied therapeutics. The sixth edition establishes this volume as one of the necessary books on the physician's ready reference shelf. The first half of the book is devoted to the physiologic and biochemical background of food substances and discussions basic to an understanding of human ecology and its relations to health and disease. The second part of the book is devoted to a detailed discussion of nutrition in disease with very fine chapters on diabetes, gout, obesity, diseases of the kidney and urinary tract, and the digestive, cardiovascular and endocrine systems. There is a very fine chapter on the importance of nutrition in surgery. The volume is carefully annotated, contains many valuable tables and an excellent bibliography. This book is highly recommended without reservation to student, physician and teacher.

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FUNCTIONAL ENDOCRINOLOGY—From Birth Through Adolescence. Nathan B. Talbot, M.D., Associate Professor of Pediatrics; Edna H. Sobel, M.D., formerly Research Fellow in Pediatrics; Janet W. McArthur, M.D., Instructor in Gynecology; and John D. Crawford, M.D., Instructor in Pediatrics, all at Harvard University. Published for the Commonwealth Fund, Harvard University Press, Cambridge, Mass., 1952. 638 pages, \$10.00.

The general substance of this book is concisely described by its full title. The authors introduce the discussion of each endocrine gland with a detailed and single exposition of the hormonal physiology involved. A careful description of methods employed for appraising normal action is also provided. After establishing this background, they present clinical material illustrating hypo- and hyperfunction of each gland. Whenever possible precise methods of therapy are given.

This book is not a recapitulation of known facts but an effort to recognize the mass of material that has been accumulating so rapidly in recent years. For brevity and clarity, the authors deliberately present single hypotheses of debatable subjects and defend their newer concepts with experimental and clinical data drawn, for the most part, from their own wealth of experience. This results in a directness and unity of presentation which makes the text exceedingly readable, informative and provocative.

A single endocrine system is discussed in each chapter. There are tables summarizing data and illustrative case histories when pertinent. In addition, there are numerous schematic drawings, apparently included as pictorial aides for the reader. This reviewer found them tedious. However, they may be omitted without sacrificing the lucidity of

the text. The clinician who expects to find readily a discussion of a subject, e.g., dwarfism, will be disappointed. The material is so organized that he must consult the clinical section in each chapter. However, this very organization gives value to the book. Emphasis is placed on the action and interaction of hormones in health and disease which has much vaster application in medicine today than a discussion of simple endocrinopathies.

* * *

PARDON MY SNEEZE. Milton Millman, M.D., Fellow American Academy of Allergists. Millman Books, 1635 India Street, San Diego, 1952.

Much of the information and advice contained in Dr. Millman's book, "Pardon My Sneeze," is accurate and might be helpful to patients. He devotes a large amount of space to a discussion of the elimination diet which would probably aid the patient who is receiving this type of diagnostic care. However, his statement that the skin tests for food are only 50 per cent accurate might be questioned by some allergists who have found them to be considerably more dependable than this figure would indicate.

The latter part of the book contains specific information for the allergic patient which should assist him to recognize and shun most common allergens. Chapter 20 is devoted to a discussion of how to avoid some of the more common miscellaneous allergens, both ingestants and contactants, such as flaxseed, orris root, feathers and animal danders. Chapter 21 goes into considerable detail about common food allergens, where they occur and how to avoid them. Chapters 22 through 27, the final chapters in the book, contain recipes and menus for the allergic patient, together with some advice on the use of these recipes. Such data should be helpful to the allergic patient.

The physical appearance of the book itself is not prepossessing with its paper back and unattractive type. There is a lack of dignity in the presentation of the subject matter and the cartoons with which the book is illustrated, as well as the text itself, take a flippant attitude toward allergy. The subject is poorly presented, the book is repetitious and tiresome and would be more likely to discourage the allergic patient than lift his morale and encourage him to continue proper treatment.

Apparently the book was not carefully edited for grammatical errors as they occur with a fair degree of frequency. On page 39, for example, the following sentence appears, "Most cases, fortunately are worked out relatively rapid." Such errors indicate a lack of care in both the writing and correcting of the manuscript. The bibliography is inadequate with less than a dozen references.

In summary, portions of the book will undoubtedly be an aid to the allergic patient but the manner of presentation indicates haste, lack of care and a flippant attitude in the preparation of the manuscript. The physical appearance is not attractive but this might be accounted for on the basis of present high publishing costs.

1952 YEAR BOOK OF OBSTETRICS AND GYNECOLOGY—Edited by J. P. Greenhill, M.D., F.A.C.S., Professor of Gynecology, Cook County Graduate School of Medicine. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago, 1952. 575 pages, \$5.50.

The 1952 Year Book of Obstetrics and Gynecology, edited by J. P. Greenhill, again presents a comprehensive review of the world literature as it applies to this specialized field. The articles abstracted in this volume cover the period July 1951 through June 1952. As usual, the work is well done. The material is well-balanced, 283 pages of the text being devoted to obstetrics and 272 to gynecology. Practicing obstetricians will appreciate the generous portion of the former section allocated to the various aspects of labor and problems associated therewith. Adequate coverage of progress in research in gynecological and obstetrical fields is presented, but is not overdone. The editorial comments are cogent. In general, this current edition of the Year Book continues to merit the high place this publication holds as a reference work.

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OPERATIVE NEUROSURGERY—With Emphasis on Procedures in Trauma—Elisha Stephens Gurdjian, M.D., Professor of Neurosurgery, Wayne University College of Medicine, and John E. Webster, M.D., Assistant Professor of Surgery, Wayne University College of Medicine. The Williams and Wilkins Company, Baltimore, 1952. 422 pages, 129 plates, \$10.00.

This is a well-written concise book on neurological surgery. It will serve the general practitioner and general surgeon who are often forced to do some neurosurgical procedures on traumatized patients. The contents of the book include four sections: (1) the head, (2) the spine, (3) the autonomic nervous system, and (4) the peripheral nervous system. The illustrations are abundant but extremely difficult to understand. They consist of semi-diagrammatic line drawings but the contrast in them is poor, and the text itself must be carefully read and studied in an effort to understand the illustrations. The book is essentially devoted to surgical techniques with very little discussion of diagnostic and physiological considerations. The book fills a void in neurosurgical literature, for a concise book on neurosurgical operations has been needed. In the past one has had to refer to individual articles or monographs in order to obtain much of the information in this book. This book can be recommended to young surgeons interested in neurosurgery and to practicing surgeons who must do occasional neurosurgical procedures.

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BACTERIAL AND MYCOTIC INFECTIONS OF MAN—2nd Edition—Edited by Rene J. Dubos, Ph.D., The Rockefeller Institute for Medical Research, J. B. Lippincott Company, Philadelphia, 1952. 885 pages, 98 illustrations, \$7.50.

The National Foundation for Infantile Paralysis, Inc., has done doctors a good service by aiding the publication of this useful book so as to bring the cost within reasonable limits. Needless to say, Dr. Dubos has assembled a panel of top authorities to write the various sections. The book is not primarily a clinical treatise; while clinical matters are dealt with, it is primarily a discussion of clinical bacteriology. Typhoid fever, for example, which covered 50 pages in Osler's textbook, here receives two pages, and so forth. Swift's article on the streptococci, one of the best in the volume, occupies about 60 pages; of these streptococcal diseases of man are discussed in 15 pages. But a superb background is developed by the fundamental discussion of streptococci from the biological and clinical bacteriological standpoints.

The volume is finely printed and illustrated and each

article is followed by a comprehensive bibliography. It fills a gap between the ordinary textbook of bacteriology and the standard textbook on medicine; at the moderate price it should be within the reach of every doctor and student.

* * *

THE TREATMENT OF INJURIES TO THE NERVOUS SYSTEM—Donald Munro, M.D., F.A.C.S., Surgeon-in-Chief, Department of Neurosurgery, The Boston City Hospital; Associate Professor of Neurosurgery, Boston University School of Medicine; Assistant Professor of Neurosurgery, Harvard Medical School. W. B. Saunders Company, Philadelphia, 1952. 284 pages with 47 figures, \$7.50.

This monograph presents in a single volume the thoughts and conclusions arrived at by the author during a professional lifetime in which the treatment of injuries to the central nervous system has been his particular interest. Few men have had or will have Dr. Munro's broad experience in the handling of this type of lesion of the nervous system. Coupled with this opportunity, he has brought to bear an original approach to the handling of traumatic problems which has resulted in many therapeutic developments which are in general use today. The section devoted to the management of the paralyzed bladder is of particular interest, as is also the chapter on rehabilitation.

It should be mentioned that there are some opinions and recommendations expressed here which are controversial. An example of this relates to recommended fluid intake following injury. To many practitioners, the amount suggested will seem large and perhaps not in keeping with current thinking concerning water metabolism and brain edema. The author's enthusiasm for section of the tentorium will also require critical consideration.

In the process of putting to use some of these unique recommendations, surgeons must consider a factor which the author could not stress as much as perhaps it should be emphasized; this is the role of constant personal attention to detail which is of such great importance to the success of his endeavor in this demanding field.

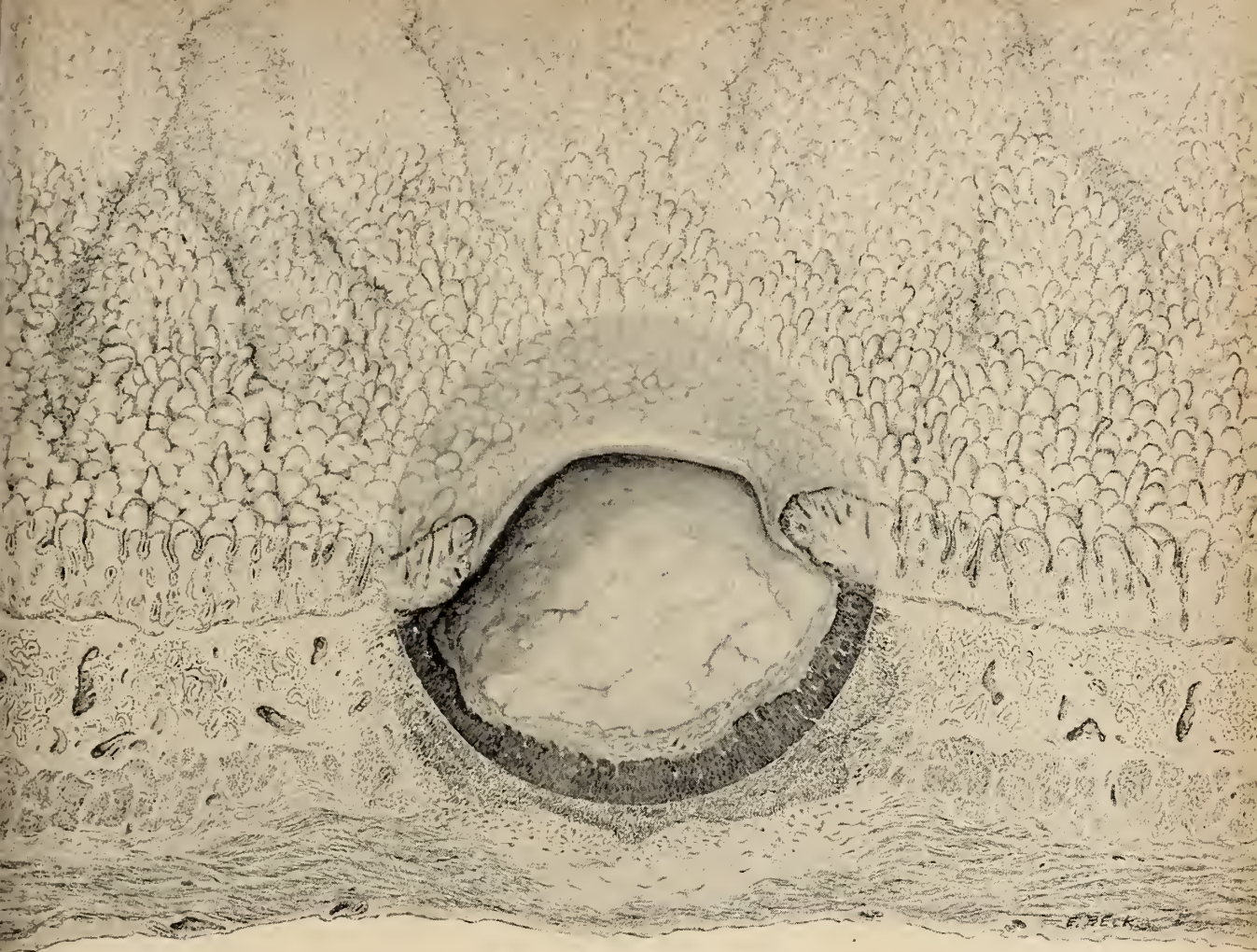
The monograph is written for all who are called upon to deal with injury to the nervous system. As such it will be of most interest to the neurosurgeon. To those of this group who will study it as a whole, thoroughly and critically, it will be a welcome addition to the working library.

* * *

STANDARD VALUES IN BLOOD—Being the first fascicle of a Handbook of Biological Data. Edited by Errett C. Albritton, A.B., M.D., Fry Professor of Physiology, the George Washington University. Prepared under the direction of the Committee on the Handbook of Biological Data, American Institute of Biological Sciences, the National Research Council. W. B. Saunders Company, Philadelphia, 1952. 199 pages, \$4.50.

It is impossible in limited space to describe adequately the contents of this volume, which in general consists of many tables containing data pertaining to blood. Great pains were taken to assure presentation of the most reliable values for a wide variety of substances. Mean values are supplemented by ranges whenever possible, and the data have been collected from many animals in addition to man. Sources of information are cited.

Subjects include physical properties, coagulation phenomena, blood groups, hemoglobin, blood and bone marrow cells, and chemical substances. One may find the concentration of valine in mouse plasma, riboflavin in snake blood, or arginase activity in man's erythrocytes. Effective levels of therapeutic agents are given. Tables concerning the effects of radiation on peripheral blood and the changes in stored preserve blood are reminders of our times. The volume belongs in the hands of investigators everywhere.



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Young Heart Victims Can Lead Relatively Normal Lives

Life with an ailing heart can be long, full and useful.

The knowledge of this fact is the best medicine for a child so afflicted, in the opinion of Dr. James A. Brussel, Queens Village, N. Y.

"Not many years ago, the child who had survived the acute phase of rheumatic heart disease faced a future of questionable length with a gloomy sense of utter futility," Dr. Brussel wrote in a recent issue of *Today's Health*, published by the American Medical Association.

"Soon he would become imbued with the thought that he was of no use to the world and little to himself. On an already handicapped cardiac system, this psychological burden had a ravaging effect, and not infrequently premature demise was the result—sometimes self-inflicted because of the very mental factors."

Today, however, there is much to be done for cardiac children, and every reason to be confident a brighter future is available for them, he stated.

Achievement of this brighter future is not merely a contest between the worker and the child's physical handicap, Dr. Brussel stressed. It is a campaign involving the child, his family, his environment, his training, his future, and his mental attitudes—in fact, his whole world.

Diseases of the heart have obvious social implications for the patient and the community. There can be no choice between the invalid totally dependent on charity and welfare support and the rehabilitated cardiac who is self-sufficient and economically and spiritually independent, according to Dr. Brussel.

Parents, as well as the child, must learn an attitude of optimism, as "no cardiac child can master his disability in an environment that shuns him and makes him feel he is an unwanted burden," Dr. Brussel pointed out.

Children must be taught that if they permit their damaged hearts to build up reserve and strength by avoiding emotional and physical strain, they can anticipate comparative equality later in an adult world, Dr. Brussel stated.

If this is done, the average cardiac child, before he reaches adolescence, instinctively learns to know his own limitations; he is aware of his physical capacity, and as he makes progress, he can tell just how much he can safely attempt.

"A sensible program for the cardiac must begin as soon as symptoms have disappeared," Dr. Brussel said. "Physical and allied laboratory examinations serve as a medical inventory to assay his present abilities and potentialities. Because a child requires further home convalescence is no reason why his rehabilitation program cannot be initiated.

(Continued on Page 60)

Rheumatic Fever Recurrences May Be Prevented by New Compound

A new penicillin compound, not readily absorbed by the body and which may offer prolonged protection against recurrences of rheumatic fever, was described in a recent issue of the *Journal of the American Medical Association*.

The new repository compound is known as "bicillin." Tests have shown that after administration of a single intramuscular injection, sufficient prophylactic amounts of the drug remain in the body for periods ranging up to four weeks, according to Dr. Gene H. Stollerman, Hastings-on-Hudson, N. Y., and Dr. Jerome H. Rusoff, New York City. Ordinary penicillin requires one to three doses daily to maintain proper protection.

The doctors pointed out that the new compound also may prove effective in the treatment and prevention of such diseases as pneumonia, gonorrhea, meningitis and syphilis.

"The problem of employing penicillin as a prophylactic agent is largely a practical one," the doctors stated. "Current methods for maintaining continuous prophylaxis with penicillin involve oral administration of relatively large doses, once to three times daily, with the patient in the fasting state. The success of such treatment depends largely on the patient's strict adherence to this regimen without interruption. In addition, only a fraction (about one-fifth) of the dose of penicillin administered is absorbed and the oral route is, consequently, costly and wasteful.

"If, however, penicillin could be maintained in the tissues for protracted periods by means of single injections given at infrequent intervals, parenteral administration should prove economical and practical.

"The data presented indicate that it is possible to maintain low serum levels of penicillin continuously in a high percentage of rheumatic children by relatively infrequent intramuscular injections of 'bicillin.'

"The demonstration of detectable amounts of penicillin in the serum of most patients for four weeks following the administration of 1,250,000 units of 'bicillin' suggests the feasibility of maintaining continuous drug prophylaxis against recurrences by administration of single monthly intramuscular injections."

The doctors reported on a study of 135 children and eight adults who were known rheumatic subjects or in whom group A streptococci (one of the bacteria which may be implicated in causing rheumatic fever) were found and who were given the drug as a prophylactic agent.

Those patients who received 300,000 units of the new compound were found to have the "bicillin" in their systems seven days after an injection, those who received 600,000 units for 12 to 14 days, and

(Continued on Page 60)



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Young Heart Victims Can Lead Relatively Normal Lives

(Continued from Page 54)

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Rheumatic Fever Recurrences May Be Prevented by New Compound

(Continued from Page 54)

those who received 1,200,000 or more units for as long as four weeks.

In addition, the doctors stated that a single injection of the drug controlled group A streptococci in the throats of 11 of the 13 patients in whom the organism was found. A second, larger dose eliminated the organism in the two remaining patients.

The doctors reported that the bacteria did not become any more resistant to the new compound than they did to regular forms of penicillin.

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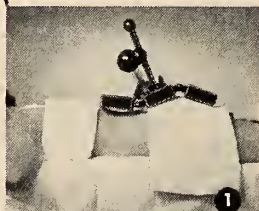
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Reassurance May Save Life of Injured By Preventing Shock

As music soothes the savage beast, so may reassurance save the life of the injured.

Counteracting anxiety by reassurance, assuming a calm and cheerful manner, and diverting attention are important aspects of treating shock, in the opinion of Dr. Robert J. Cook, St. Louis.

Prompt and effective first aid in cases of shock, which commonly results from wounds and accidents, can be given by anyone who understands the condition, Dr. Cook wrote in a recent issue of *Today's Health*, published by the American Medical Association.

In addition to offering reassurance, treatment of shock consists of giving a blood transfusion if there has been blood loss, a plasma transfusion if there has been loss of blood fluids, or administration of large amounts of fruit juices if there has been excessive dehydration, he stated, adding:

"To counteract severe pain, morphine is usually used. To counteract the lack of blood in the brain, the head may be lowered. To counteract the cooling of the body due to the evaporation of sweat, the patient is wrapped in warm blankets. Artificial respiration may be used if there is respiratory failure. Undue bleeding is controlled by tourniquet or a compression bandage."

The average 150-pound person has approximately 10 pints of blood, Dr. Cook pointed out. If more than three pints is lost, shock usually occurs. However, it can occur even if one pint is lost; this depends largely on the rate of loss.

Although shock can set in within 15 seconds after an injury, it usually begins much later, Dr. Cook stated. If apprehension, chilling, pain or blood loss can be reduced within eight hours of the injury, shock can be prevented.

Shock, a relative lack of blood in the body, may be caused by a decrease in the normal blood volume, an increase of the total capacity of the blood vessels, or most commonly, by both conditions to some degree, Dr. Cook said, adding:

"Decrease in the blood volume may be caused by internal or external hemorrhage as a result of injury, or by loss of water and salt, such as from sweating in heat exhaustion or following large-scale vomiting or diarrhea.

"The increased capacity of the blood vessels may result from nervous reflexes induced by acute anxiety, by contact with high voltage, or by severe pain.

"The relative lack of blood in shock often results in too little blood reaching the brain, and drowsiness or unconsciousness may be produced. If the lack of blood is not overcome within 12 to 24 hours, death usually occurs."

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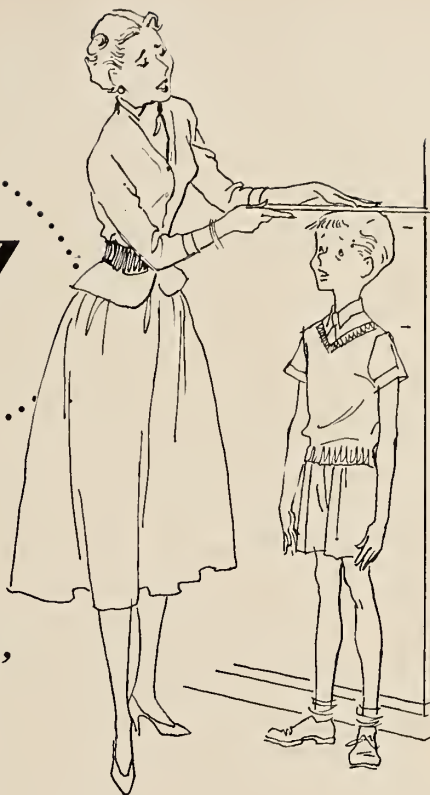
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BIBLIOGRAPHY

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Wilde, E.: J. Pediat. 40:565 (May) 1952.



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Don't Fear a Biopsy—It's Valuable, Simple, Painless

Biopsies are valuable, simple and painless.

However, when a doctor tells a patient that a biopsy should be made, the patient is filled with contemplations of anything from a painful process to a major operation, according to Dr. Leslie A. Walker, Providence, R. I.

Biopsy is the diagnostic examination of tissue removed from a living subject, Dr. Walker wrote in a recent issue of *Today's Health*, published by the American Medical Association. It aids the physician in diagnosing various forms of cancer and other diseases; it equally proves that a condition thought to be cancerous or of a serious nature is relatively or completely benign. This is achieved through observation of tell-tale characteristics of the tissue.

To make a biopsy, the doctor pointed out, a small piece of suspected tissue, usually no larger than an eighth of an inch in diameter, is removed from an area—the surface of the body, certain areas beneath

the skin or from within various openings of the body. Usually no anesthetic is needed, but when a small amount of pain is likely, the affected area can be efficiently anesthetized with a local anesthetic.

Different types of instruments are used to remove the bit of tissue, depending on the type of biopsy desired, he added. A small knife blade often is used, or, at times, a wooden or metal spatula is employed. An instrument commonly used in obtaining tissue from the female organs is the biopsy forceps—two small cups with sharpened edges on the ends of a scissors-like instrument.

The tissue is fixed in a solution of formaldehyde and embedded in paraffin, according to Dr. Walker. It is then cut into thin pieces, which are stained with various dyes and mounted on a glass slide. The pathologist looks at it under the microscope and diagnosis is made.

Biopsies are commonly done in the physician's office, but occasionally, because of the necessity of associated studies, hospitalization is advised, Dr. Walker concluded.

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40 MINUTES FROM LOS ANGELES

Treatment of Thyroid Disease Aided by Use of Hormone Drug

Continuous research with cortisone, one of the hormone drugs, has shown it to be useful in the treatment of subacute nonsuppurative thyroiditis, according to an article in a recent issue of the *Journal of the American Medical Association*. Subacute nonsuppurative thyroiditis, a relatively rare condition, is an inflammatory disease of the thyroid that results in an enlarged, firm, tender gland.

Three cases in which the preparation was used successfully to treat the disease were reported by Drs. Dwight E. Clark, Thomas S. Nelson and Robert J. Raiman, Chicago. All are associated with the de-

partment of surgery of the University of Chicago.

"A single daily dose of 25 milligrams was given to each patient for a total of 12 to 14 days," they stated. "Marked relief of both local and systemic symptoms was apparent within 24 hours. The pain and tenderness had completely disappeared in from four to seven days. Within the first week of therapy, the glands had decreased in size and become softer. In all cases, the thyroid gland had returned to normal size and consistency within two months. There have been no recurrences.

"Cortisone, which is presented as another mode of therapy, has the advantages of prompt and

(Continued on Page 88)

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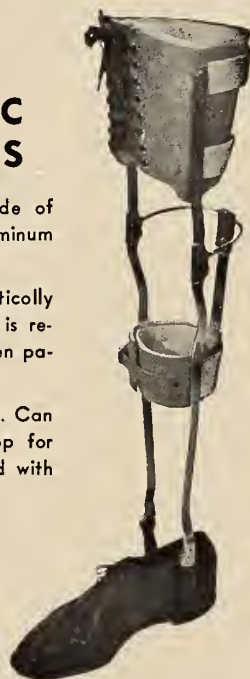
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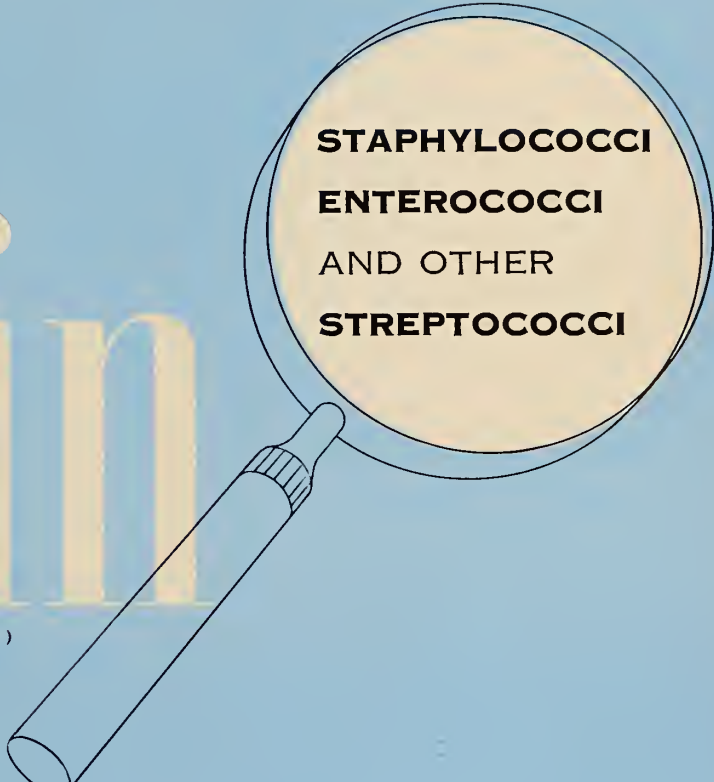
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(Continued from Page 58)

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High Caloric Feedings Aid in Preoperative Treatment

High caloric feedings, consisting primarily of a 40 per cent fat emulsion, have proved successful in the preoperative treatment of seriously ill patients suffering from malnutrition, it was reported in a recent issue of the *Journal of the American Medical Association*. Results of such therapy, it is believed, will lessen the risks of major surgery.

A study of such treatment on 90 patients who required prolonged liquid feeding owing to obstructive lesions of the mouth, esophagus or stomach was reported by Drs. Edward M. Goldberg, Irving F. Stein, Jr., and Karl A. Meyer, Chicago. They are associated with the department of surgery, Northwestern University Medical School, the Cook County Hospital and the Hektoen Institute for Medical Research.

The patients were divided into two groups—65 with incomplete obstructive lesions who were administered the feedings by mouth, and 25 with complete obstructive lesions who were given the fat emulsion directly into the stomach or small intestines by means of an artificial opening. The majority of patients received no food other than the fat emulsion, to which was added protein concentrate, minerals and vitamins. Many received between 4,000 and 5,000 calories daily.

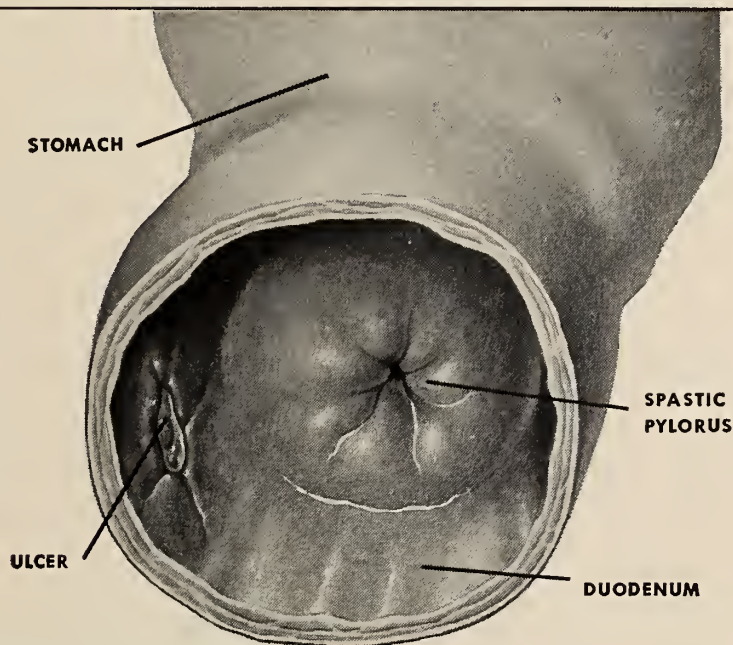
Of the former group, 12 patients had to be taken off the fat feedings because of disagreeable symptoms produced. Of the 53 who received the fat emulsion, 44 (83 per cent) gained weight, 21 (40 per cent) noted an increase in appetite, and 35 (66 per cent) had a feeling of increased strength, according to the doctors.

In the second group, 10 (40 per cent) gained weight, five noted an increase in appetite, and eight experienced increase in strength. Of the patients who failed to gained weight, 12 had far advanced cancer, the doctors pointed out.

"A striking clinical response was noted in patients with benign obstructive disease of the upper gastrointestinal tract," the doctors wrote. "These patients rapidly gained weight and strength. Several patients who appeared near death showed dramatic improvement following high caloric therapy. A similar excellent response was noted in patients with malignancy of the mouth.

"A variable response was noted in cases of malignancy of the esophagus and stomach, depending on the stage of the disease. Preoperative feedings in patients with resectable lesions, in general, gave good results, whereas those patients with far advanced lesions showed temporary, if any, benefits. The major difficulty in such treatment, the doctors stated, was the intolerance to large doses of fat emulsion by patients. This intolerance, due to unpleasant taste or symptoms such as nausea, vomiting, diarrhea or constipation, occurred in approximately 50 per cent of the cases.

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Treatment of Thyroid Disease Aided by Use of Hormone Drug

(Continued from Page 77)

dramatic relief of symptoms, ease of administration, and, in the dosage levels and duration of treatment found necessary, the absence of any side-reactions. In view of these facts, we feel justified in recommending the use of cortisone as an agent useful in the treatment of subacute nonsuppurative thyroiditis."

Previous treatment of the condition, by drugs and/or x-rays, generally gave good results, the doctors stated. However, these forms of therapy have such disadvantages as inconvenience of treatment,

longer periods of treatment before relief was obtained, a high recurrence rate, and toxic side-effects in some instances.

The cause of the disease has not been proven, the doctors pointed out. Most of those persons afflicted with it complain of bodily discomfort, weakness and neck pain; many have low grade fever.

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Secy., J. O. Chiappella, Paradise.

Fresno County Medical Society, 616 Security Bank Building, Fresno. Meets Second Tuesday, 6:30 p.m., Sunnyside Country Club.
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Pres., Fred D. Lord, 4060 Orange St., Riverside.
Secy., John S. O'Toole, 3616 Main St., Riverside.

Sacramento Society for Medical Improvement, 2731 Capitol Avenue, Sacramento. Meets Third Tuesday, 8:30 p.m., Sutter Hospital Auditorium.
Pres., Charles E. Grayson, 1215 Twenty-eighth Street, Sacramento.
Secy., Frank G. Schiro, 2909 J Street, Sacramento.

San Benito County Medical Society. Meets First Thursday, Hazel Hawkins Memorial Hospital, Hollister.
Pres., David G. Young, Jr., 535 Monterey St., Hollister.
Secy., Gurdon L. Bradt, 1025 San Benito Street, Hollister.

San Bernardino County Medical Society. Meets First Tuesday, 8:00 p.m., San Bernardino County Charity Hospital.
Pres., C. Norman Abbott, 125 West F Street, Ontario.
Secy., Carl M. Hadley, 315 Platt Building, San Bernardino.

San Diego County Medical Society, 101 Medical-Dental Bldg., San Diego 1. Meets Second Tuesday, Manor Hotel.
Pres., Ralph M. King, 8453 La Mesa Blvd., La Mesa.
Secy., W. H. Geistweit, Jr., 810 Medico-Dental Bldg., San Diego 1.

San Francisco Medical Society, 2180 Washington Street, San Francisco 9. Meets Second Tuesday, 8:15 p.m., 2180 Washington Street, San Francisco 9.
Pres., Edmond J. Morrissey, 450 Sutter St., San Francisco 8.
Secy., Herbert C. Moffitt, Jr., 909 Hyde St., San Francisco 9.

San Joaquin County Medical Society. Meets First Thursday, 8:15 p.m., American Trust Building, Stockton.
Pres., Emil Gough, 127 East Acacia Street, Stockton.
Secy., Frank A. McGuire, Medico-Dental Building, Stockton.

San Luis Obispo County Medical Society. Meets Third Saturday, 7:00 p.m., Golden Dragon Cafe, San Luis Obispo.
Pres., Jim Scow, 717-17th St., Paso Robles.
Secy., John H. Woodbridge, 891 Pismo Street, San Luis Obispo.

San Mateo County Medical Society, 235 Third Avenue, San Mateo. Meets Third Tuesday of each month.
Pres., Alf T. Haerem, 500 Arguello, Redwood City.
Secy., Jackson T. Flanders, 348 Broadway, Redwood City.

Santa Barbara County Medical Society, 300 West Pueblo St., Santa Barbara. Meets Second Monday, Cottage Hospital.
Pres., Walter C. Graham, 1421 State St., Santa Barbara.
Secy., Arthur E. Wentz, 103 E. Micheltorena, Santa Barbara.

Santa Clara County Medical Society, 1101 Medico-Dental Bldg., San Jose 14. Meets Third Monday of every month.
Pres., George W. Waters, 101 Race St., San Jose.
Secy., Dan Brodovsky, St. Claire Bldg., San Jose.

Santa Cruz County Medical Society. Meets every Second month, Second Tuesday. Time, place to be announced.
Pres., Philip E. Karleen, Soquel.
Secy., Samuel B. Randall, 230 Walnut Street, Santa Cruz.

Shasta County Medical Society. Meets Second Monday.
Pres., Louis Nash, 1440 Market St., Redding.
Secy., Henry R. Eagle, 1348 Market St., Redding.

***Siskiyou** County Medical Society. Meets Sunday on call.
Pres., J. W. Reynolds, 420 Florence Ave., Dunsmuir.
Secy., E. V. Anderson, Corwin Bldg., Dunsmuir.

Solano County Medical Society. Meets Second Tuesday, 8:00 p.m., Casa de Vallejo Hotel, Vallejo.
Pres., Milton B. Smith, 1234 Empire St., Fairfield.
Secy., Herbert L. Joseph, 607 Carolina, Vallejo.

Sonoma County Medical Society, 300 American Trust Bldg., Santa Rosa. Meets Second Thursday.
Pres., Carl E. Anderson, 1150 Montgomery Dr., Santa Rosa.
Secy., Frank E. Lones, 300 American Trust Bldg., Santa Rosa.

Stanislaus County Medical Society. Meets Third Thursday, 7 p.m., Hotel Hughson, Modesto.
Pres., Robert Barker, 1024 J St., Modesto.
Secy., J. Lyle Spelmann, 140 McHenry Ave., Modesto.

Tehama County Medical Society. Meets at call of President.
Pres., E. W. Wilson, 737 Washington, Red Bluff.
Secy., James L. Faulkner, 420 Pine St., Red Bluff.

Tulare County Medical Society.
Pres., Robt. D. Karstaedt, P.O. Box 1311, Porterville.
Secy., Vincent Dungan, 217 S. Willis, Visalia.

Ventura County Medical Society. Meets Second Tuesday, 7:15 p.m., Colonial House, Oxnard.
Pres., James M. Hunter, 1590 E. Main St., Ventura.
Secy., Franklin K. Helbling, 34 N. Ash Street, Ventura.

Yolo County Medical Society. Meets First Wednesday.
Pres., Robert A. Burns, Woodland Clinic Hospital, Woodland.
Secy., Richard J. Cundiff, Woodland Clinic, Woodland.

Yuba-Sutter-Colusa County Medical Society. Meets Second Tuesday.
Pres., Wm. J. Vasquez, 801-4th St., Marysville.
Secy., Robt. I. Hodgins, 729 D St., Marysville.

* 1952 officers.

(For roster of C.M.A. committees and other organizations, see last month's issue.)

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No Magic Foods Will Produce Super Athletes

There are no magic foods which will produce superpower or agility in athletes.

Feeding an athlete is basically no different from feeding an average citizen, it was stated in an article in a recent issue of the *Journal of the American Medical Association*. The article was prepared in cooperation with the A.M.A.'s Council on Foods and Nutrition.

"In order to obtain the energy and dexterity necessary for a winning team, week after week, an adequate diet is essential not only on days of a game, but on every day," it said.

"The same meat, milk, eggs, vegetables, fruits, enriched and whole grain breads and cereals that are fundamental to the health of every person are needed by the athlete.

"Good nutrition is not the sole solution to producing a winning team, but attractive, nourishing food in the right amount is an important step in that direction."

The energy needs of an athlete are considerably more than those of a moderately sedentary person, the article pointed out. Therefore, the athlete must consume enough food so that his energy intake will balance his energy output, and so that he will reach or maintain the body weight that will provide maximum efficiency for a given sport. Actually, the biggest problem at most training tables is to prevent undesirable weight gain, it added.

"Whether an athlete must gain, lose or maintain weight, there are certain foods that he should include in his daily diet," the article said. "These are: a large serving of a protein food (meat, cheese, fish, or eggs); two or more glasses of milk; a variety of vegetables, especially green and yellow; fruits, citrus daily; and generous amounts of enriched and whole grain breads and cereals.

"At the training table, as elsewhere, food should be carefully prepared and served if it is to be consumed and enjoyed."

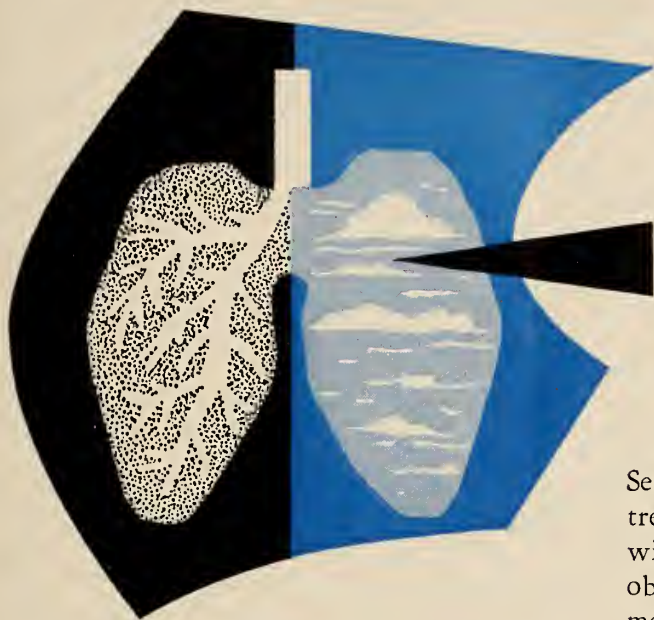
According to the article, many present-day training table diets are regulated principally by "old wives' tales." As long as the proper, protective foods are not neglected and weight is maintained at the desired level, cakes, pies, gravies and the like are not harmful to the athlete.

Psychological aspects of eating are of equal importance in the athlete's diet, it was pointed out. Many contestants eat an adequate diet, but some get upset over a game or resent the restrictions placed on their eating and social habits by a coach. It is the coach's responsibility to convince the players that the restrictions are made for the best interest of the team and the athlete himself.

"Eating is partly habit and must be treated as such," it added. "There is much to be gained in

(Continued on Page 14)

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PHYSIOLOGIC THERAPEUTICS THROUGH BIORESEARCH

No Magic Foods Will Produce Super Athletes

(Continued from Page 10)

understanding a player's nutritional problems, for it is not easy to break lifelong habits.

"In order to fulfill its function, a training table should encourage its members to eat and like a variety of foods—meat, milk, eggs, cheese, fish, fruits, vegetables, and cereals and breads—every day and to maintain weight at the desired level. These are the principles of good nutrition for athletes as well as nonathletes."

Another important problem in the feeding of an athlete is the time at which meals should be eaten, according to the article. Practical eating schedules can be arranged for any sport. Reasonable amounts of food and fluids may be taken five or six hours before game time, and food should not be eaten for one to two hours following the contest.

There is no evidence, the article pointed out, that drinking a judicious amount of fluids during strenuous exercise is harmful. There also is no need for quick energy as studies have shown that except after prolonged exercise for five hours or so, the normal

(Continued on Page 16)

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*Adams, C. H., and Cecil, R. L.: Ann. Int. Med. 33:163, 1950.

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No Magic Foods Will Produce Super Athletes

(Continued from Page 14)

body can furnish the required energy from its reserves.

The article was prepared by Harold L. Upjohn, B.S., Julia A. Shea, M.A., and Frederick J. Stare, M.D., all of Boston, and Lou Little, B.A., New York. Mr. Upjohn, Miss Shea and Dr. Stare are associated with the department of nutrition, Harvard School of Public Health; Dr. Stare is also associated with the Peter Bent Brigham Hospital, and Mr. Little with the department of physical education, Columbia University.

A.M.A. Contributes \$5,000 to the Netherlands Flood Relief

A \$5,000 contribution to physicians in the Netherlands, to help alleviate the suffering and devastation brought on by recent flood waters, was voted by the Board of Trustees of the American Medical Association during a recent meeting here.

In a cable sent to Dr. L. A. Hulst, president of the Netherlands Medical Association, A.M.A. President Louis H. Bauer, Hempstead, N. Y., stated:

"American Medical Association forwarding your society immediately \$5,000 to be utilized as you see fit. American doctors everywhere extend deepest sympathy to your heroic country in its darkest hour."

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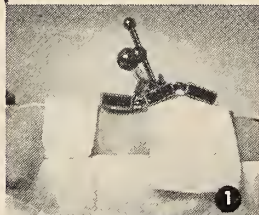
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Recommend Use of Single Antibiotic

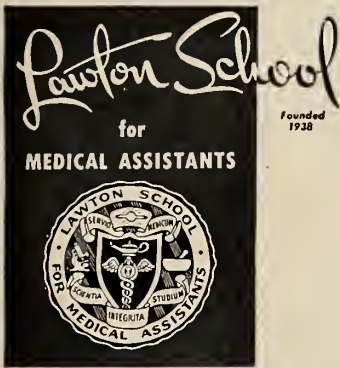
Only in certain serious diseases should more than a single antibiotic be employed at one time, in the opinion of Drs. Harry F. Dowling, Mark H. Lepper and George G. Jackson, Chicago. All are associated with the department of medicine, University of Illinois College of Medicine.

Use of more than one antibiotic to treat a disease sometimes results in one antibiotic interfering with the therapeutic effect of the second, the doctors wrote in a recent issue of the *Journal of the American Medical Association*.

According to the doctors, clinical experience has shown that a single antibiotic can be used effectively in most infections caused by a single organism, and that one antibiotic is all that is necessary in the treatment of most mixed infections. In rare cases, where a single antibiotic is not sufficient, the sensitivity of the bacteria should be studied in order to determine which antibiotic should be used, they added.

Only when streptomycin is the principal effective drug is it necessary to employ simultaneously two

(Continued on Page 32)



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1. Lewis, J. M. and Cohan, S. Q.: M. Clin. N. A. 34:413, March 1950.

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New Antibiotic Proved Useful in Treating Several Diseases

Oral administration of erythromycin, a new antibiotic, has proved satisfactory in the treatment of several common diseases, it was reported in a recent issue of the *Journal of the American Medical Association* by Drs. Jay Ward Smith, Richard W. Dyke and Richard S. Griffith, Indianapolis. All are associated with the Indianapolis General Hospital.

They described eight patients with throat infections caused by hemolytic streptococci in whom a great reduction of fever and an alleviation of toxic symptoms was noted within 24 hours after treatment with erythromycin was begun. Throat cultures of the patients were negative within 48 hours.

Five persons afflicted with hemolytic streptococcus infections of other parts of the body also showed prompt clinical response following use of the drug, they added.

Seven of eight patients suffering from lobar pneumonia treated with the preparation showed prompt, favorable response to such therapy, the doctors stated. All these patients were seriously ill on admission to the hospital, and the eighth patient, who later died, was nearly moribund on entry.

Other diseases which responded favorably to treatment with erythromycin included bacterial inflammation of the lining of the heart, bacterial inflammation of the throat, bacterial infections of the blood, and localized bacterial infections causing inflammation of the skin.

In these cases, no serious toxic effects resulted from treatment with erythromycin, according to the doctors.

"The number of cases reported here is too small to justify any very definite conclusions, but some comment is warranted," the doctors stated. "It appears that doses of 300 to 500 milligrams of erythromycin every six hours are effective in producing both clinical and bacteriological remission in hemolytic streptococcus throat infections.

"Erythromycin is at least moderately effective in the treatment of pneumococcus pneumonia. How it compares with other effective agents can only be determined by extensive clinical trial."

In other types of infections, the drug deserves further trial, the doctors said, adding:

"As reports and evidence indicate that there is a steadily increasing incidence of staphylococcus infections that are resistant to other antibiotics, further studies with erythromycin are of paramount importance."

However, the doctors stressed that resistant organisms can develop during treatment with the drug. Erythromycin may have very limited usefulness in processes in which the causative organism is not readily reached by high concentrations of it, they added.

Some Nutritive Failure Effects May Be Reversed

Children, unlike Topsy in "Uncle Tom's Cabin," don't "jist growed."

Certain nutritional requirements must be met or retardation of growth will ensue. Some of these retarding effects, including that of prolonged nutritive failure on the skeletal development, are reversible if the nutrient value of a dietary supplement is sufficient to overcome the accumulated deficiencies, it was stated in a recent issue of the *American Journal of Diseases of Children*, published by the American Medical Association.

An article in the journal reported on a study of 41 children, 19 boys and 22 girls between the ages of one and 10½ years with chronic nutritive failure and growth retardation, who were given dietary milk supplements equivalent in protein value to three quarts of milk a week. A similar group received no dietary supplements.

At the conclusion of 40 months, examination of each group showed that there was little difference in the skeletal development of the two groups, according to the article. At that time, however, 19 of the children who were receiving dietary supplements were given increased allotments so that they were receiving an equivalent of 12 quarts of milk a week.

Six months later, the article stated, "every child who received the increased amount of supplement showed a substantial increase (80 per cent) in the rate of bone maturation." In contrast, it was reported that 11 of the 19 children who received no supplement underwent a slowing down in the rate of bone maturation during this period.

"The present findings clearly demonstrate that alteration in the pattern of skeletal maturation in children with nutritive failure may be reversed to a considerable degree by the supplementary feeding of reconstituted whole or nonfat milk solids," the article stated. "The removal of deficiencies of skeletal maturation in these children, regardless of age, appears to be primarily dependent on the adequacy of the level of supplementation.

"Thus, children with chronic nutritive failure given supplements of cow's milk at a level equivalent in protein value to three quarts per week for a period of 40 months, showed little if any change in rate of bone maturation as contrasted with that of a comparable group not receiving the added milk.

"A fourfold increase in the quantity of milk supplements for a period of six months resulted in a readily detectable improvement in the over-all rate of bone maturation in each of 19 children given the increased quantity of supplement."

The article was prepared by Dr. Tom D. Spies, Birmingham, Ala.; Samuel Dreizen, D.D.S., Chicago; Richard M. Snodgrass, Ph.D., Philadelphia; George S. Parker, D.D.S., Birmingham, and Catherine Currie, B.S., Birmingham.

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Voluntary Groups Solving Rural Health Problems

Individual initiative and voluntary organizations on local, state and national levels are bringing about a solution of the medical care problems in small communities, it was reported at the recent National Conference on Rural Health, held at Roanoke, Va.

The two-day meeting, sponsored by the Council on Rural Health of the American Medical Association, brought together medical, farm and civic leaders from all parts of the country who are working to improve medical care in rural areas. Those attending represented organizations with several million members.

"There is much evidence warranting the conclusion that the trend is away from statism," Dr. F. S. Crockett, Lafayette, Ind., chairman of the council, told the meeting.

Dr. Crockett added that continuing education of the public is the best method for achieving the goal of individual and local self-help in the solving of medical problems in rural sections.

He urged expansion of voluntary insurance to cover those over 65 years of age and the chronically ill, the promotion of a better distribution of physicians by establishing needed hospital and medical facilities, the providing of good medical care for the indigent, and the extension of public health coverage.

Reviewing the concerted movement for improved rural health since the first national conference, a meeting of doctors and laymen in Chicago in 1946, he said that one point uppermost in the planning has been that "there was to be no Santa Claus in the picture."

"Our objective in this common effort has been the benefit of the individual and his community," Dr. Crockett stated. "This benefit was not to be had for free, but was to be earned by the community and by the individual."

He reported that group strength has been obtained through the establishment of rural health councils, made up of representatives of the medical profession, farm organizations, extension services, and community organizations of all kinds.

"The trading center and its surrounding trade area form the logical health council area," he pointed out. "It has been observed that people doctor where they go for commodities and other services. The county being a convenient area surrounding the trade center, or county seat, we have come to call these local organizations county health councils.

"This is the level where local self-determination permits the fullest expression of individual thinking. Schools, churches, highways, public health services, law enforcement, and everything else entering into

(Continued on Page 33)

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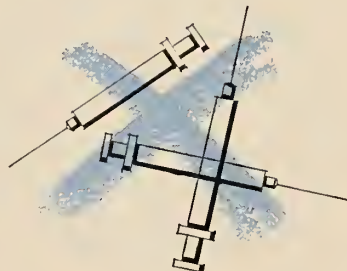


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(Continued from Page 17)

antibiotics to diminish the frequency of the development of resistant strains of bacteria, the doctors pointed out.

However, they stated, in certain infections the value of combinations of antibiotics has been proved to produce a therapeutic effect that cannot be achieved when one of the antibiotics is employed alone or when it is not feasible to increase the dose.

Examples include the use of streptomycin plus aureomycin, chloramphenicol or oxytetracycline in brucellosis; penicillin plus aureomycin, chloram-

phenicol or oxytetracycline in serious staphylococcal infections when the organism is resistant to only one of these antibiotics when it is used alone; bacitracin and penicillin in syphilis, and penicillin and streptomycin in infections of the heart lining caused by intestinal streptococci.

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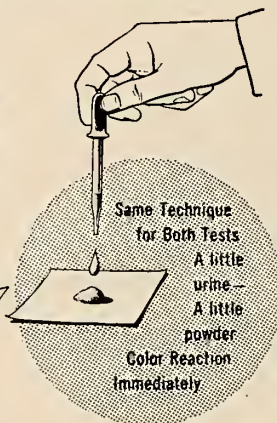
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Voluntary Groups Solving Rural Health Problems

(Continued from Page 30)

mately into daily living, reflect the attitude toward, and the concept of, citizen responsibilities."

State health councils have been established in some instances, he said. He pointed to the Virginia Council on Health and Medical Care as an example.

Dr. Crockett said that since 1946 many doctors have settled in villages, adding:

"I doubt if there are now many prosperous communities, where desirable living conditions exist, lacking needed medical personnel.

"It is in communities on the lower economic income level that the greatest challenge exists. Places with poor schools, poor churches and poor roads, homes and farms go hand in hand with inadequate medical care."

An increase in purchasing power in some rural areas would go far toward solving the medical care problem and payment for service, he stated.

Dr. Crockett pointed out that health councils in many states have brought about the elimination of health hazards and have taught simple health rules to improve conditions.

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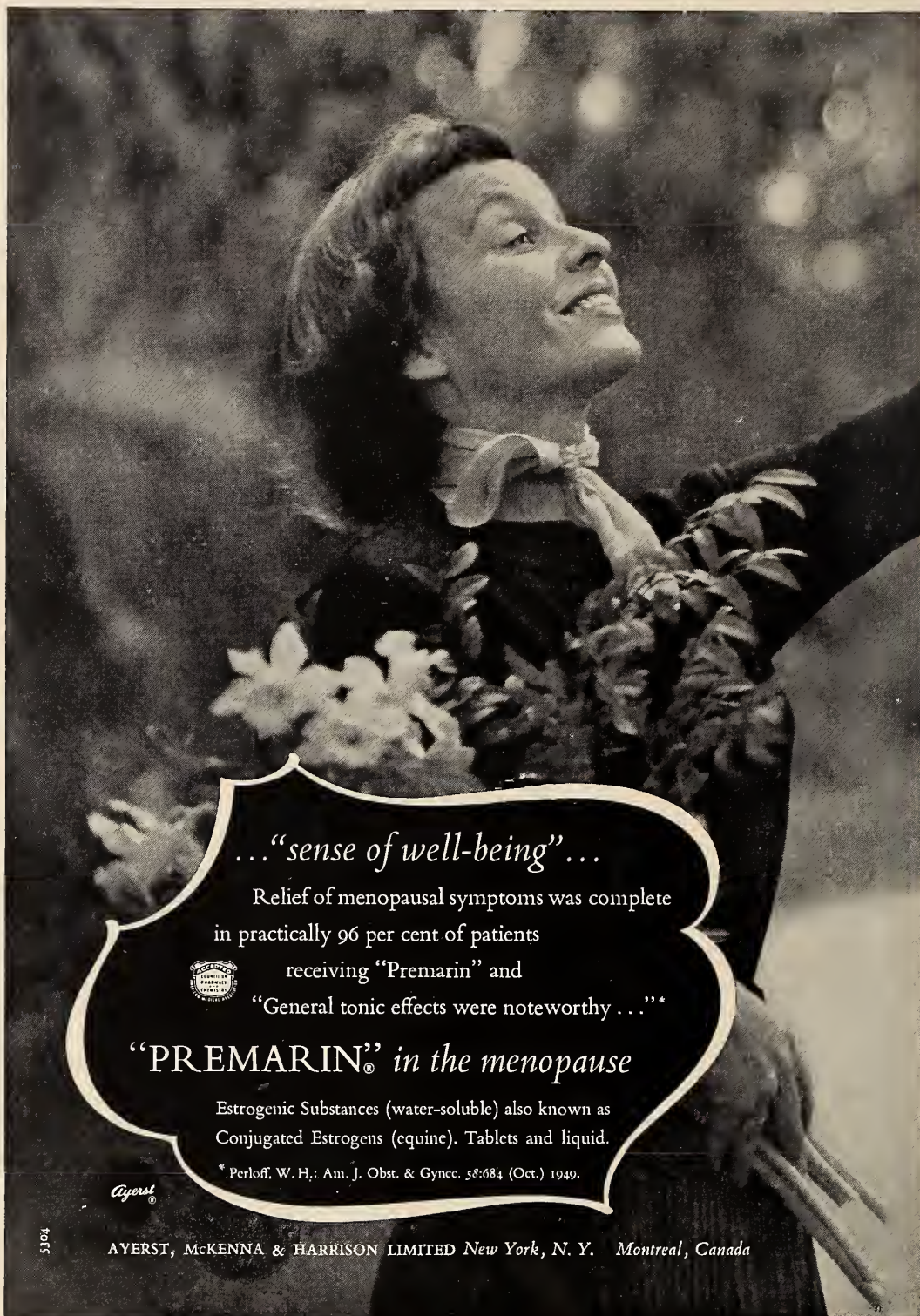
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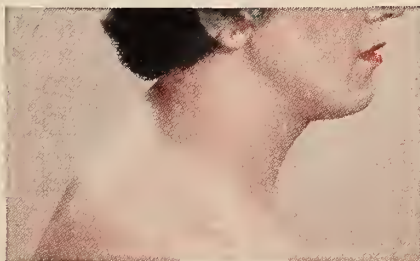
In a review article on hormonal therapy,¹ complete relief of symptoms was reported in 62 per cent of 116 asthma patients. Another 24 per cent were made "quite comfortable." Duration of relief varied widely, with remissions occasionally lasting as long as several months. The author calls these results "truly extraordinary."

¹Evans, R. R., and Rackemann, F. M.: *A.M.A. Arch. Int. Med.* 90:96-127, July 1952.

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BOOKS RECEIVED

AMERICAN POCKET MEDICAL DICTIONARY—New, 19th Edition. W. B. Saunders Company, Philadelphia, 1953. 639 pages, \$3.25 plain, and \$3.75 with thumb index.

ANATOMY OF THE NERVOUS SYSTEM, THE—Its Development and Function—New, 9th Edition. Stephen Walter Ranson, M.D., Ph.D., Late Professor of Neurology and Director of Neurological Institute, Northwestern University Medical School, Chicago. Revised by Sam Lillare Clark, M.D., Ph.D., Professor of Anatomy, the Vanderbilt University School of Medicine, Nashville. W. B. Saunders Company, Philadelphia, 1953. 581 pages with 434 illustrations, 18 in color, \$8.50.

BACK DOWN THE RIDGE. W. L. White. Harcourt, Brace and Company, 383 Madison Ave., New York, 1953. 182 pages, \$3.00.

BASEDOW'S DISEASE—The Manifestations, Timing, Duration and Outcome of Basedow's Disease; Symptoms, Severity and Age Incidence; the Disease in Children; and Its Occurrence Among Animals. H. Sattler, M.D., Professor of Ophthalmology, University of Leipzig, Germany. English Translation by G. W. and J. F. Marchand. Grune & Stratton, Inc., New York, 1952. 605 pages, \$10.00.

BASIS OF CLINICAL NEUROLOGY, THE—The Anatomy and Physiology of the Nervous System in Their Application to Clinical Neurology—3rd Edition. Samuel Brock, M.D., Professor of Neurology, College of Medicine, New York University. The Williams and Wilkins Company, Baltimore, 1953. 510 pages, \$7.00.

BEDSIDE DIAGNOSIS—2nd Edition. Charles Seward, M.D., F.R.C.P. (Edin.), Honorary Physician, Royal Devon and Exeter Hospitals; Consulting Physician, Princess Elizabeth Orthopedic Hospital. Williams and Wilkins Company, Baltimore, distributor for E. & S. Livingstone, Ltd., London, 1952. 380 pages, \$3.50.

CLINICAL ALLERGY. French K. Hansel, M.D., M.S., Director, Hansel Foundation for Education and Research in Allergy; Chief of Allergy Service, DePaul Hospital, St. Louis. The C. V. Mosby Company, St. Louis, 1953. 1005 pages, 86 illustrations, and 3 color plates, \$17.50.

DANGER SIGNALS—Warnings of Serious Diseases. Walter C. Alvarez, M.D., Consultant in Medicine, Emeritus, Mayo Clinic. Wilcox & Follett Company, Chicago, 1953. 176 pages, \$3.00.

DIRECT ANALYSIS—Selected Papers. John N. Rosen, M.D. Grune and Stratton, New York, 1953. 184 pages, \$3.75.

DOCTOR'S SOLILOQUY. A. Joseph Haykin Krimsky, M.D., Philosophical Library, New York, N. Y., 1953. 116 pages, \$2.75.

ESSENTIALS OF MEDICAL DIAGNOSIS, THE—A Manual for Students and Practitioners. Rt. Hon. Lord Horder, G.C.V.O., M.D., F.R.C.P. (Lond.), Extra Physician to H. M. the Queen; and A. E. Gow, M.D., F.R.C.P. (Lond.), Honorary Physician to Household, H. R. H. the Duchess of Kent. Second Edition. Revised with the Assistance of Ronald Bodley Scott, M.A., D.M. (Oxon.), F.R.C.P. (Lond.), Physician to H. M. Household. The Williams and Wilkins Company, Baltimore, 1953. 462 pages, 6 color and 17 black and white plates, 22 figures and 5 charts, \$6.00.

FANCONI AND WALLGREN'S TEXTBOOK OF PEDIATRICS. Edited by W. R. F. Collis, M.A., M.D., F.R.C.P., F.R.C.P.I., D.P.H., Lecturer in Pediatrics, Dublin University; Director, Department of Pediatrics, Rotunda Hospital, Dublin. Translator and Co-Editor: E. Kawerau, M.B., M.Sc., A.R.I.C., Senior Lecturer in Chemical Pathology, St. Mary's Hospital, London. Grune & Stratton, New York, 1952. 1104 pages, \$19.50.

FUNDAMENTALS OF CLINICAL CANCER—With Emphasis on Early Diagnosis and Treatment. Leonard B. Goldman, M.D., Clinical Professor of Radiotherapy, New York Medical College. Grune & Stratton, New York, 1953. 312 pages, \$8.75.

GASTRIC CANCER. Alfred H. Iason, M.D., Attending Surgeon, Adelphi Hospital; Director of Surgery, Brooklyn Hospital for the Aged; Instructor in Anatomy, New York Medical College, with illustrations by Alfred Feinberg, Instructor of Medical Illustration, Department of Pathology, College of Physicians and Surgeons, Columbia University. Grune & Stratton, New York, 1953. 316 pages, \$7.50.

GIFFORD'S TEXTBOOK OF OPHTHALMOLOGY—Fifth Edition. Francis Heed Adler, M.D., Professor of Ophthalmology, University of Pennsylvania Medical School, Consulting Surgeon, Wills Eye Hospital, Philadelphia. 488 pages, 281 figures and 26 color plates. W. B. Saunders Company, Philadelphia, 1953. \$7.50.

HOSPITAL FORMULARY—Compendium of Useful Information—Second Edition and Completely Revised. University of California. University of California Press, Berkeley and Los Angeles, 1952. 318 pages, \$3.75.

INFECTIOUS MONONUCLEOSIS. Sidney Leibowitz, M.D., Associate Physician, Beth Israel Hospital, New York, N. Y. Modern Medical Monographs No. 5. Grune & Stratton, New York, 1953. 163 pages, \$4.75.

MANUAL OF CLINICAL ALLERGY. A. John M. Sheldon, M.D., Professor of Internal Medicine and Assistant to the Chairman of the Department of Postgraduate Medicine; Robert G. Lowell, M.D., Instructor in Internal Medicine, and Kenneth P. Mathews, M.D., Assistant Professor of Internal Medicine, all at the University of Michigan Medical School. W. B. Saunders Company, Philadelphia, 1953. 413 pages with 27 figures, \$8.50.

OFFICE MANAGEMENT OF OCULAR DISEASES. William F. Hughes, Jr., M.D., Professor and Head of Department of Ophthalmology, University of Illinois College of Medicine. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago, 1953. 451 pages, \$9.00.

PHARYNX, THE—Basic Aspects and Clinical Problems. Edited by Abraham R. Hollender, M.D., F.A.C.S., Professor of Otolaryngology, Emeritus, University of Illinois College of Medicine. The Year Book Publishers, Inc., 200 East Illinois, Chicago, 1953. 560 pages, \$15.00.

PHYSIOLOGIC THERAPY FOR OBSTRUCTIVE VASCULAR DISEASE. Isaac Starr, M.D., Hartzell Research Professor of Therapeutics, School of Medicine, University of Pennsylvania, Modern Medical Monographs No. 6. Grune and Stratton, New York, 1953. 38 pages, \$2.50.

PRACTICE OF PSYCHIATRY. William S. Sadler, M.D., F.A.P.A., Consulting Psychiatrist, Columbus Hospital and Pinal Sanitarium, Chicago. The C. V. Mosby Company, St. Louis, 1953. 1183 pages, \$15.00.

SYMPTOMS AND SIGNS IN CLINICAL MEDICINE—An Introduction to Medical Diagnosis—Fifth Edition. E. Noble Chamberlain, M.D., M.Sc., F.R.C.P., Senior Lecturer in Medicine, University of Liverpool. The Williams and Wilkins Company, Baltimore, 1952. 479 pages, 354 illustrations, 19 in color, \$8.00.

TEXTBOOK OF VIROLOGY—For Students and Practitioners of Medicine—Second Edition. A. J. Rhodes, M.D., F.R.C.P. (Edin.), Research Associate, Connaught Medical Research Laboratories, and Professor of Virus Infections, School of Hygiene, University of Toronto; and C. E. van Rooyen, M.D., D.Sc. (Edin.), M.R.C.P. (Lond.), Research Member Connaught Medical Research Laboratories, and Professor of Virus Infections, School of Hygiene, University of Toronto. The Williams and Wilkins Company, Baltimore, 1953. 561 pages, \$8.00.

TREATMENT OF MENTAL DISORDER. Leo Alexander, M.D., Director, Neurobiological Unit, Division of Psychiatric Research, Boston State Hospital, and Instructor in Psychiatry, Tufts Medical School. W. B. Saunders Company, Philadelphia, 1953. 507 pages with 143 figures, \$10.00.

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Removal of the adrenal glands, once a fatal procedure, is now possible through improvements in operative techniques and preoperative and post-operative care, it was reported in a recent issue of the *Journal of the American Medical Association*.

Surgical correction now possible in two sometimes fatal diseases caused by the overfunctioning of the adrenal glands was described by Drs. Randall G. Sprague, Walter F. Kvale and James T. Priestley, Rochester, Minn. Drs. Sprague and Kvale are associated with the division of medicine and Dr. Priestley with the division of surgery, Mayo Clinic.

The two diseases described by the doctors were Cushing's syndrome and pheochromocytoma.

Cushing's syndrome is an affliction caused by the overfunctioning of the outer part of the adrenal glands, called the cortex, which secretes such hormones as cortisone. The disease, which may be caused by a tumor of the cortex, is characterized, among other symptoms, by obesity or an abnormal distribution of fat and wasting of muscles so that the face, neck and trunk appear obese and the extremities thin; muscular weakness, and hypertension. In women there also is a tendency toward an abnormal growth of hair. This disease rarely occurs in men.

Pheochromocytoma is a tumor or tumors within the inner part of the adrenal glands, known as the medulla, which secretes substances producing high blood pressure.

The doctors reported on 50 patients with severe or moderately severe Cushing's syndrome whose adrenal glands were completely or almost completely removed during the last seven years. Forty-one of the patients are now living—40 in a state of satisfactory remission from the disease.

Administration of cortisone before and after the operation has lessened the possibility of serious adrenal insufficiency during and following such operations, the doctors pointed out. Since the use of cortisone, there has been only one hospital death, they added. Twenty of the patients still are receiving cortisone therapy.

Lack of reliable medical treatment for Cushing's syndrome and the poor prognosis that confronts many of those persons without treatment, in the doctors' opinion, justified their first attempts in 1945 to treat the condition by removal of most of the adrenal glands, they stated, adding:

"It was reasoned that radical reduction of the amount of hyperfunctioning adrenal tissue, regardless of what the remote cause of the condition might

(Continued on Page 48)



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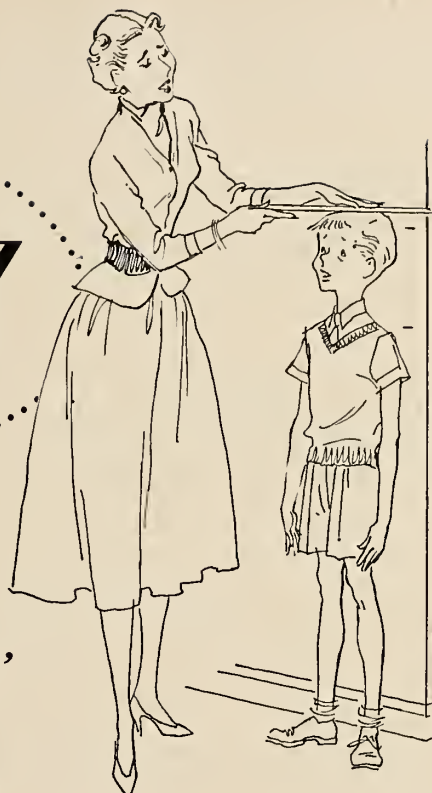
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B I B L I O G R A P H Y

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Wetzel, N.C.; Fargo, W.C.; Smith, I.H., and Helikson, J.: Science 110:651 (Dec. 16) 1949.
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(Continued from Page 42)

be, should bring about remission of the signs and symptoms of the disease. This has proved to be the case."

Twenty-five cases of pheochromocytoma treated by removal of all or almost all of the adrenal glands were also described by the doctors. Some of the patients had intermittent periods of high blood pressure due to tumors of the glands, while others experienced continuous high blood pressure.

"The surgical treatment of patients who have pheochromocytoma should be productive of gratifying results in virtually all cases unless the tumor is malignant," they said. "Such results, of course, require complete removal of all tumor tissue."

Blood pressure during and following the operation can and should be controlled with drugs that increase or decrease the blood pressure as is needed, according to the doctors. Administration of such preparations may be discontinued 36 to 48 hours after the operation as blood pressure becomes satisfactorily maintained without the benefit of outside stimulation, they added.

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The pool of gamma globulin available for civilian use during this year's poliomyelitis season has been increased by almost 50 per cent. Announcement of the new source came from the Armed Forces Medical Policy Council, which said two million cubic centimeters were being turned over to Red Cross

from military stockpiles. This will bring the civilian vaccine supply for paralytic polio to 6,540,000 cc., about enough for a million average doses. (An additional two million cc. are earmarked for measles and infectious hepatitis patients.) Despite the increased supply, use of gamma globulin for polio will be limited strictly to epidemic areas.

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Coccidioidomycosis as a Tool in the Study of Granulomatous Disease

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TO ONE STUDYING the various disorders within that large group called "granulomatous diseases," striking similarities in pattern are evident. Sometimes the similarities seem to transcend the differences. With better understanding, some of the dissimilarities are explainable and closer adherence to a general pattern is emphasized. Perhaps some of the hitherto elusive answers to questions regarding immunologic processes—in tuberculosis, for example—might be obtained by studying coccidioidomycosis which, while similar in many ways to other granulomatous diseases, is more suitable for research.

For 43 years after the first case was reported in 1892, coccidioidomycosis was considered to be a very rare, chronic, wasting disease, originally pulmonary but soon becoming disseminated extensively throughout the body, and fatal in about 50 per cent of cases. In 1935, however, Gifford and Dickson presented revolutionary evidence which led to recognition that in certain endemic regions, notably the San Joaquin Valley of California, infection occurs in almost all persons within the first four years of residence in such a region, owing to inhalation of dust containing the fungus in the form of arthrospores.

It was learned that at least 60 per cent of the persons infected were entirely unaware of the infection throughout whatever "active" phase it had in them, yet they acquired thereby a complete and

• In spite of a far-reaching research effort extending over many years the processes by which the human body acquires immunologic resistance to most of the chronic infectious diseases remain obscure. With few exceptions, methods by which such resistance may be artificially produced or stimulated have not been discovered. In coccidioidomycosis there are several instances in which the immunologic reactions seem to be less complicated than those encountered in tuberculosis, for example. More concentrated research in coccidioidomycosis might lead to a better understanding of immunologic processes in general.

permanent specific immunity. Persons who had clinical symptoms also acquired perfect immunity, but only after an illness varying from the most trifling respiratory inflammation to pulmonary symptoms and signs so severe that, were they caused by any other infective agent, would certainly be expected to cause death. In only one case in several thousands in which so-called "primary infection" occurs does complete immunity fail to develop; and in that event the disease progresses to the disseminated, granulomatous, often fatal form in which it was first known.

Several early investigators developed and attempted to use for diagnostic purposes an extract of cultures of *Coccidioides* (hereafter called "coccidioidin"). It was injected intracutaneously in the

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manner of Koch's old tuberculin. The results were confusing and the test was considered to have little specificity: it yielded highly positive reactions of the delayed "tuberculin" type in many persons who were obviously healthy, and on the other hand tended toward negativity in persons who could easily be proved to have the disease in the most serious form.

After Gifford's and Dickson's observations, however, the reasons for these surprising phenomena became clear. A highly positive reaction to the test develops during the acquisition of specific immunity and persists for many years. It was apparent that the former "false positives" occurred in persons who either were then acquiring specific immunity or had been infected and had recovered with permanent immunity and persistent ability to respond to the test. The "false negatives" occurred in cases in which the disease was progressing unhindered by any perceptible degree of specific immunity.

ALLERGIC MANIFESTATIONS IN THE SKIN

It was also observed that in many patients allergic manifestations in the skin, such as erythema nodosum and erythema multiforme, occurred in the early phase of coccidioidomycosis. Such patients rarely die of the disease and the syndrome soon became useful to clinicians as an indication of favorable prognosis. When tested intracutaneously with coccidioidin, the skin of all such patients reacts violently, necessitating the dilution of the material to 1:10,000 if undue discomfort and necrosis are to be avoided. To emphasize further the close correlation between coccidioidin and the immunologic or allergenic material responsible for the cutaneous manifestations, it was occasionally observed that erythema nodosum was actually precipitated or caused to recur by the application of the test material.

Thus originated the concept that the degree of immunologic resistance which the patient was mobilizing against the disease could be quantitatively measured by the delayed tuberculin-type reaction produced by the intracutaneous injection of various dilutions of coccidioidin. This theory still serves clinicians admirably, although it is not valid to infer either that the immunity depends upon such sensitivity or that it invariably parallels it.

Some persons, however, do die of the disseminated infection even though they have a fair degree of reaction to the intracutaneous test. It seems likely that in such cases the disease swiftly becomes so extensive as to overwhelm an otherwise satisfactory degree of developing immunity. Thus an accurate prognosis cannot be given after merely measuring the fighting power which the patient is mobilizing against the disease; it is also necessary to measure

the fighting power of the adversary, which is the extent and severity of the infection. For this vital information clinicians have learned to rely upon the reaction to another test in which coccidioidin is used as the antigen in the fixation of complement, carried out exactly as in the quantitative Kolmer modification of the Wassermann test. It may be necessary to dilute the serum serially to eight or ten tubes (1:128 to 1:512) to determine the endpoint. In the case of mild infections there is complete complement fixation only in the first few tubes, while the severest ones yield positive results throughout the series. Fixation in a dilution of more than 1:32 (sixth tube) is likely to indicate dissemination. In experienced hands this quantitative test may be said to measure reliably the extent and degree of severity of the infection.

Through observation of the relationship of results of the skin test with those of the complement fixation test, prognosis can be determined with greater accuracy and at a much earlier time than by any other combination of clinical signs or laboratory procedures. A high degree of sensitivity to the intracutaneous test coupled with a negative or low-titred reaction to the complement fixation test indicates an excellent prognosis, even though all other evidence is to the contrary. (One exception must be pointed out: Meningitis can supervene and cause the death of the patient too rapidly for the tests to reveal the change in prognosis.) On the other hand a negative or low degree of response to the intracutaneous test accompanied by complement fixation in high dilution (over 1:32) means actual or impending dissemination and a serious outlook.

Naturally it is possible during the course of the disease for the reaction to either test to become more positive while reaction to the other declines, necessitating a change in appraisal of prognosis. For this reason several successive observations must be made to determine the trend of the sensitivities before ultimate accuracy may be achieved. This phenomenon of reversal in the reactions to the tests is observed, for example, when a patient with disseminated coccidioidomycosis completely recovers. Frequent testing will make it possible to anticipate the clinical improvement some weeks before it actually occurs.

There is an interesting variation in the time factors in these two reactions. After the incubation period of 8 to 28 days (more often 10 to 16) the reaction to the intracutaneous test usually becomes positive in from one to three weeks if it is to do so at all. The degree of reaction then rapidly increases, becoming highest in persons in whom there are other signs of allergic hypersensitivity such as erythema nodosum or erythema multiforme. Although it may decline somewhat, it remains high during

convalescence and continues so for many years. A slow decrease in degree of reaction over a decade or more is frequently observed. Thus, it is clear that a positive reaction to the intracutaneous test does not necessarily indicate the presence of active infection. It does, however, mean that the patient either has or has had the disease. The test is highly specific except when it is necessary to use undiluted or only slightly diluted coccidioidin to elicit a positive response: most of the non-specific cross reactions, such as that to histoplasmosis, occur when strong concentrations are used.

The complement fixation reaction appears more slowly, sometimes not until three months after the onset of the clinical symptoms. It rises to whatever height the severity and extent of involvement of the body may carry it and declines only as recovery progresses. It must become entirely negative before cure can be presumed. The specificity of this reaction is as high as that of the intracutaneous test; it may be stated that when the reaction is positive, in more than very small titre, the presence of active coccidioidomycosis is indicated.

In the early months of the infection the complement fixation reaction cannot be relied upon as an accurate measure of severity because of the delay in its appearance. Fortunately still another test employing coccidioidin serves to fill this gap, at least partially. When it is used as the antigen in a precipitin test with various dilutions of serum from the patient, a positive reaction indicative of active disease may be obtained as early as one week after clinical symptoms appear, and almost always by the end of the third week. This test, however, unlike the complement fixation test, elicits no reaction after three or four months regardless of the state of progress of the disease. It is thus of more value in establishing the diagnosis than in prognosis.

The fact that coccidioidomycosis is unique among diseases in that there is such a battery of immunologic tests so highly specific in providing accurate diagnostic and prognostic information is one of the features which make it so attractive for study.

Heretofore the antigen has been referred to simply as "coccidioidin," which implies that the same antigen could serve equally well in all three tests. It is true that all coccidioidin is produced in the same manner by culturing the organism in a synthetic liquid medium containing inorganic salts, glucose, glycerin, and only a single organic constituent related in any way to protein, the amino acid amide, asparagine. This protein-free medium is identical with that used for the commercial preparation of old tuberculin. The filtrate of such cultures contains the antigen. Owing to factors not yet explained or controllable, if several flasks are inoculated with *Coccidioides* in

the same manner and cultured under identical circumstances, there will be considerable quantitative variation in the yield of coccidioidin and a very surprising qualitative variation as well. One flask may yield a high concentration of coccidioidin which will be found admirably suited to all three tests while another may supply none of the complement fixation factor while producing both skin testing and precipitation testing antigens very efficiently. The power to react in the complement fixation test can be removed from coccidioidin by heating or by any of several chemical treatments, while its skin testing efficiency remains unimpaired even by autoclaving. During these processes a small percentage of nitrogenous material, non-protein in nature, is destroyed and with that destruction the capacity to fix complement vanishes. Further chemical attacks upon the molecule are known which can remove its capacity to evoke the skin test reaction while it still retains its activity for precipitin reactions. Coccidioidin is thus probably a complex polysaccharide molecule containing several haptene groups, some of which may be amino acids.

It is interesting to examine more fully the subject of hypersensitivity as evidenced by the reaction to the intracutaneous injection of specific material. Identical responses of tuberculin type have been observed to occur following contact of bodily tissues with many different kinds of noxious materials such as bacteria, fungi, viruses, rickettsiae, animal parasites, protozoa, foods and danders. It seems unlikely that nature would furnish such a mode of reaction so universally if it had no beneficial effect, and yet in most instances hypersensitivity appears to be harmful. This particular type of hypersensitivity has been best investigated as it occurs in the tuberculin test, and it was long regarded as an essential factor in acquired immunity to tuberculosis. In recent years, however, convincing evidence has been assembled that there is no relation between the two. It is pointed out that in tuberculosis the degree of hypersensitivity does not parallel the degree of acquired immunity; that the inflammation resulting from hypersensitivity does not prevent the spread of the bacilli which the inflammation of immunized tissue achieves; that effective resistance can be established without simultaneously establishing hypersensitivity; that acquired immunity can be passively transferred while hypersensitivity cannot; and finally that acquired resistance persists after hypersensitivity has waned or has been abolished by desensitization. Similar evidence has been assembled in a number of other diseases; so much in fact that it seems like heresy to maintain that in coccidioidomycosis immunity is clinically measurable by the hypersensitivity reaction. Many of the above mentioned factors

however, have not yet been approached experimentally in coccidioidomycosis; the only one which seems certainly established is that acquired immunity does persist after the reaction to the intracutaneous test becomes negative through years of slow decline.

There is, however, one factor of tremendous potential importance in which coccidioidomycosis differs from other diseases. The delayed tuberculin type of reaction occurs in all instances as a response to the intracutaneous injection of various substances, all of them proteins with the single exception of coccidioidin, a protein-free polysaccharide. Thus, even if it becomes established that this reaction has no relation to immunity in all other instances, coccidioidomycosis may prove to be the exception.

It must be also pointed out that specific polysaccharides possess immunizing power in other diseases in which proteins do not. For example, pneumococcal polysaccharide will serve to immunize an animal without concomitant development of hypersensitivity; pneumococcal protein produces only hypersensitivity.

It is noteworthy that coccidioidin is usually produced by culturing the organisms in the same asparagine synthetic medium that is used for making tuberculin. Simple filtration yields only protein from cultures of tubercle bacilli grown in this manner whereas similar treatment of *Coccidioides* cultures produces only a protein-free polysaccharide. It is true also that additional antigenic substances such as polysaccharides and lipid may be obtained from the bodies of the tubercle bacilli themselves, by crushing or grinding the culture before filtration. But when *Coccidioides* cultures are treated in the same way, no new antigens are added to the filtrate. It is important to remember that it is pure tuberculo-protein that is the measuring stick in the tuberculin test; in the coccidioidin test it is a polysaccharide.

Also of interest is that the "acute splenic tumor" which occurs in many bacterial infections is not observed in coccidioidomycosis. In this reaction the spleen is filled with large mononuclear cells with large vesicular nuclei and basophilic cytoplasm which some observers consider to be phagocytes and others lymphocytes. The cause of this phenomenon is always a protein substance; some proteins can even produce it unaccompanied by infection. It would seem from these facts that coccidioides may not produce any specific protein while growing as a parasite in the animal body just as it does not do so when grown in artificial culture. This circumstance also lends credence to the belief that coccidioidin may fully represent all the antigenic potentialities of the fungus.

The great weight of experience with the complement fixation reaction, particularly as it applies to

syphilis, makes it also seem heretical to claim that in coccidioidomycosis the degree of reaction is directly related to the severity of the disease and that by repeated tests the clinical course can be charted. That this view may still prove to be valid must be admitted, however, when the antigens are compared—or contrasted. In syphilis the antigen is not even remotely related to the disease nor to the organism which causes it; in coccidioidomycosis it is a pure extract of the organism. Furthermore the antigen in syphilis is a lipid and it ought not be assumed as inevitable that there should be similarities between the reactions evoked by it and the reactions caused by the polysaccharide antigen of *Coccidioides*.

WIDE RANGE OF TISSUE RESPONSE

The pathologic response in the tissues during the course of disseminated coccidioidomycosis is an unusual feature. When a mature spherule ruptures and discharges endospores an acute inflammatory response is induced in the immediate area with collection of myriads of polymorphonuclear leukocytes—a suppurative reaction. As each endospore enlarges, the reaction around it gradually becomes more chronic and lymphocytes replace the polymorphonuclear cells, then macrophages appear together with plasma cells and large mononuclear cells. Still more growth of the spherule produces an ever more chronic infiltrate until epithelioid cells predominate, finally assuming a tuberculoid structure with giant cells in the center where the mature organism is found with its endospores. When the spherule ruptures the entire cycle is repeated. Thus, the general appearance microscopically is that of a tissue reaction of mixed type, varying from the most acute in one tiny area to the most chronic in another close by. When to the series just described is added the eosinophilic infiltrate so characteristic of the allergic erythema multiforme stage of primary coccidioidomycosis, it is realized that this disease runs the entire gamut of non-neoplastic pathologic infiltrations. In tuberculosis, the tuberculoid structure is believed to be caused by the lipids produced by the bacilli. But can it be assumed that, during its life as an animal parasite, *Coccidioides* can produce lipids as the mature spherule stage is reached when it has never been observed to do so in culture?

In the majority of infections in which the mechanism is understood, it is evident that acquired resistance is the result of the formation of antibodies by the tissues as a result of contact with the organisms. These antibodies are highly specific globulins, apparently closely related chemically to the antigens which stimulated their production. The abilities of these antibodies to attach themselves to the organisms and cause them to become mutually

adherent, to interfere with their respiration or metabolism, and to cause them to be more easily attached to and engulfed by phagocytes, are integral parts of the immunologic process. Complement fixation, precipitation, agglutination, and lysis—frequently a single antibody can cause many of these reactions in appropriate circumstances. In only a few diseases can the antibodies actually destroy the organisms without the assistance of phagocytes.

A question yet to be answered is whether or not antibodies lead to immunity in coccidioidomycosis. In the study of this disease it is a handicap to be unable to produce the fungus in pure culture in the spherule stage in which it exists while a parasite in the body. Experiments *in vitro* with such material, if it were available, might uncover antibodies not yet recognized such as those capable of producing lysis, agglutination, opsonization or even destruction of the organisms directly. Spherules have indeed been produced in culture, but not separable from the mycelial form or from the complicated proteins necessary in the medium to support the spherule stage.

It must be assumed that there are some antibodies present in the infected body, for how else can be explained the specificity of the intracutaneous test and of the complement fixation and precipitation reactions? Also these antibodies must differ from each other since each is present in individually variable quantities and at different times. The antibody responsible for the complement fixation reaction, for example, cannot be useful in supplying acquired immunity, for its presence in increasing amount indicates a serious trend in the disease; also, immunity persists long after the antigen disappears. The antibody involved in the precipitation test is present for only a few months whether the patient is destined to die or to recover. That antibody, therefore, can have nothing to do with immunity. Both of these antibodies are present in serum and can be transferred passively, even through the placenta. The antibody responsible for the reaction to the intracutaneous test on the other hand, cannot be passively transferred. Hence it is logical that it is not present in serum. If that antibody is the one actually bringing about the development of acquired immunity it is strange that its presence is manifest principally in the skin where it is least needed and can function in the poorest manner. If assisting phagocytosis is its most important duty, then why, it must be wondered, does it not concentrate near the littoral cells of the spleen, lymph nodes and marrow and the Kupfer cells of the liver instead of close to the stretched-out endothelial cells of the skin capillaries which do not function as a part of the reticulo-endothelial system, at least not immunologically.

Frequently when coccidioidin is introduced intracutaneously, there is immediate flare reaction and development of a wheal, indicating the presence of circulating antibodies. It has not been possible, however, to correlate this phenomenon with the acquisition of immunity or, indeed, in any specific manner with the disease itself. (Worthy of note in passing is that the spirochetal immobilizing antibody in syphilis is now known not to be concerned with immunity.) It cannot be definitely proved that antibodies are not present in the circulating blood, since without spherule cultures methods of detecting them are so inadequate. Attempts should be made to transfer a passive immunity by utilizing globulin fractions separated from the blood of immune persons by the several methods which have been perfected during recent years. Electrophoresis, the ultracentrifuge, Seitz filtration, lyophilization and chromatography should assist in the purification and identification of any such antibodies as may be found to exist. If by injection of an appropriate antibody a passive immunity could be conferred on those few persons who do not develop active immunity spontaneously, perhaps they could be kept alive long enough to do so.

Only immune serum from human donors could be used for the purpose. In chronic diseases antiserum from other animal species is useless, since the heterologous proteins induce antibodies against themselves which destroy or precipitate them within a short time after they are given in subsequent injections. Since antibodies are proteins, even if they could be highly purified they would still carry such species-specific antigenic power of self-destruction.

Since coccidioid infection may be acquired only in small areas, and could occur from the inhalation of a single breath of dust by a visitor from distant parts, epidemiologic control by vaccination would be difficult to obtain even if methods could be discovered. So far there have been no successful attempts to induce active immunization in any animal to any disease which is already present in the body. All such methods act only to confer on normal animals the power to resist an original acquisition of the infection.

Except for those diseases in which toxins play a major role in injuring the patient and antitoxins delay death until active immunity develops, immunologic victories over chronic diseases are rare. Most of them depend upon adventitious cross-immunity between diseases or upon discovering or producing a special strain of the organism that has diminished power to produce injurious infection yet retains its immunizing potency. There has been absolutely no evidence to show any variation in virulence in various strains of *Coccidioides*. Even

the transfer through several different species of animals in the manner which recently brought yellow fever under control through the brilliant work of Max Theiler, does not noticeably vitiate the organism.

FIELDS FOR INVESTIGATION

Coccidioidomycosis resembles tuberculosis in many ways, yet a number of immunologic differences have already been pointed out. There are clinical differences also worthy of mention, which, since they have yet to be explained, may be appropriately expressed in the form of questions. Why does tuberculosis more seriously affect young females while coccidioidomycosis is much more harmful to males? Why does tuberculosis select certain racial groups for more drastic attack without regard to color of skin, for example the Negro, and Irishman, while coccidioidomycosis is less serious in all white races and more so in dark ones? (It must be stated, however, that Filipinos withstand the disease much less well than do persons of darker skinned races.) Why does coccidioides not involve the intestinal tract although sputum rife with organisms is swallowed, yet tuberculosis readily infects that region in similar circumstances?

These and many other questions remaining unanswered point to fertile fields for study. True, the discovery of an immunologic cure for coccidioidomycosis would not in itself be of world-shaking importance. However, as Arnold Rich so aptly said: "In the attainment of her ends Nature is often prodigal of materials, but she is always rigorously economical of methods." It is almost certain that when all the facts concerning immunology are known, many of the mechanisms will be found to apply to all diseases. If even a small portion of the time, effort and expense which has been and is still being expended in the study of immunologic aspects of tuberculosis could be devoted to the study of coccidioidomycosis, a pathway might be blazed leading to the successful elimination not only of coccidioidomycosis but of the other granulomatous scourges of mankind. In California there are sufficient numbers of patients infected with *Coccidioides*, and here also are large numbers of immune persons, among whom are laboratory personnel not afraid to handle this dangerous organism. If one little barb of chauvinism be permitted (here comes the California gimmick) with the right amount of pecuniary support, California *might* initiate the conquest of granulomatous disease.

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Retroperitoneal Tumors in Children

Roentgen Diagnosis

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THERE HAVE BEEN many publications in recent years describing the radiologic findings in retroperitoneal tumors of children, but none have analyzed the relative frequency of occurrence of these signs in large groups of patients. To determine if there are any characteristics which might aid in establishing a specific diagnosis, study was made of all of the available reports of cases of Wilms' tumors, or embryonal adenocarcinoma, and neuroblastoma observed at the University of California Hospital, Children's Hospital in San Francisco and San Francisco Hospital. The study was limited to Wilms' tumor and neuroblastoma because other types of retroperitoneal tumors in infants and children are rare.

PATHOLOGY

Wilms' tumors account for about 20 per cent of all malignant diseases in childhood.³ The origin of the tumor is believed to be from mesodermal cells displaced during development but retaining the ability to grow and differentiate into various types of tissue. At first, the tumor is surrounded by a dense, connective tissue capsule and remains separated from the renal parenchyma until it is quite large. Eventually the capsule is ruptured and extension occurs to renal tissue, omentum, and adjacent viscera. Blood-borne metastases are common in lungs, brain, liver and regional lymph nodes. Microscopically, the predominant tumor elements are an abundant embryonic type of malignant connective tissue surrounding the gland-like tubules of various sizes and shapes. Epithelial cells may also form solid cords and strands of cells. Sometimes a rosette-like arrangement of epithelial cells or structures resembling abortive glomeruli are seen. Occasionally, smooth or striated muscle, cartilage, and myxomatous tissue are present.

Neuroblastoma, or sympathicoblastoma, is a highly malignant tumor which arises in either the adrenal medulla or sympathetic nervous system. Microscopically it is an extremely cellular tumor composed of small, dark cells resembling lympho-

• *A study was undertaken to determine whether there are any features of retroperitoneal tumors in children that might be demonstrated on roentgenograms to aid in identifying them preoperatively. Study was limited to Wilms' tumor of the kidney and neuroblastoma.*

Calcification was found in 57 per cent of the neuroblastomas and in only 12 per cent of Wilms' tumors. Calcifications in neuroblastomas differed from those in Wilms' tumors. Calcification in neuroblastoma was more frequent in older children than in the younger ones.

The kidney was frequently displaced by both types of tumor. However, the neuroblastoma always displaced the kidney downward, or downward and slightly outward.

In most instances, the Wilms' tumor also displaced the kidney downward and outward, but in some instances upward and medially. This, of course, depended upon the site of origin of the tumor.

There was a distortion of the intrarenal structures in 75 per cent of the cases of neuroblastoma and in 71 per cent of the cases of Wilms' tumor.

cytes. Characteristically, these cells form circular groups or pseudorosettes around a fine fibrillar network. The tumor metastasizes to liver, skull, dura, long bones and sometimes lung. Neuroblastomas which metastasize to the liver and soft tissues generally occur in younger children than those which metastasize to the skeletal system.¹

MATERIAL

The present study was concerned with only the roentgen features of the primary retroperitoneal lesions. The metastatic lesions have been described adequately in previous publications.^{2, 3, 4, 5, 6} There were 15 cases of proved Wilms' tumors and 14 cases of neuroblastoma in which adequate roentgen examinations had been carried out. Intravenous or retrograde urograms were performed on all of the pa-

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Figure 1.—Wilms' tumor containing calcium which is located in the peripheral part of the mass. The calcification does not reproduce well, but was dense, homogeneous, and arranged in concentric rings.

TABLE 1.—Clinical Data on 41 Cases of Wilms' Tumor and 14 Cases with Neuroblastoma

	Wilms' Tumor—			Neuroblastoma (Present Series)
	Present Series	Higgins	Total	
Total.....	15	26	41	14
Male	10	11	21	6
Female	5	15	20	8
Right side	9	16	25	9
Left side	8	10	18	5
Average age	30 mos.	27 mos.	28½ mos.	36 mos.

tients who had Wilms' tumors and on ten of the patients who had neuroblastomas.

Of the 15 patients who had Wilms' tumors, five were females and ten were males. In a series reported upon by Higgins,⁵ 15 of the patients were females and 11 were males. In the present series, the age of patients ranged from three days to ten years, with an average of two and a half years. This compares well with the average of two years three months in Higgins' patients. The right kidney was involved in nine patients and the left in eight. (Two of the patients had bilateral involvement, which accounts for the total of 17 tumors in 15 patients.) Higgins reported the tumor on the right side in 16 patients and

on the left side in ten. Campbell³ stated that Wilms' tumor has a predilection for the left side and for males, but gave no statistics.

Eight of the patients who had neuroblastomas were females and six were males. The tumor was located on the right side in nine cases, and in five cases on the left side. The patients were from five weeks to ten years of age; the average was three years (Table 1).

ROENTGEN EXAMINATION

Both types of tumor may cause roentgenographic evidence of a soft tissue mass with displacement of the viscera. Wyatt and Farber⁹ identified a mass roentgenologically in all but seven of a total of 34 patients with neuroblastoma. However, the cases they studied were not limited to those in which there were abdominal lesions. A mass was demonstrated on plain films of the abdomen in all patients in the present series.

The relatively frequent appearance of calcification in neuroblastoma has been mentioned as an aid in differentiating it from other tumors in the retroperitoneal region.^{2, 6, 8} However, little has been said

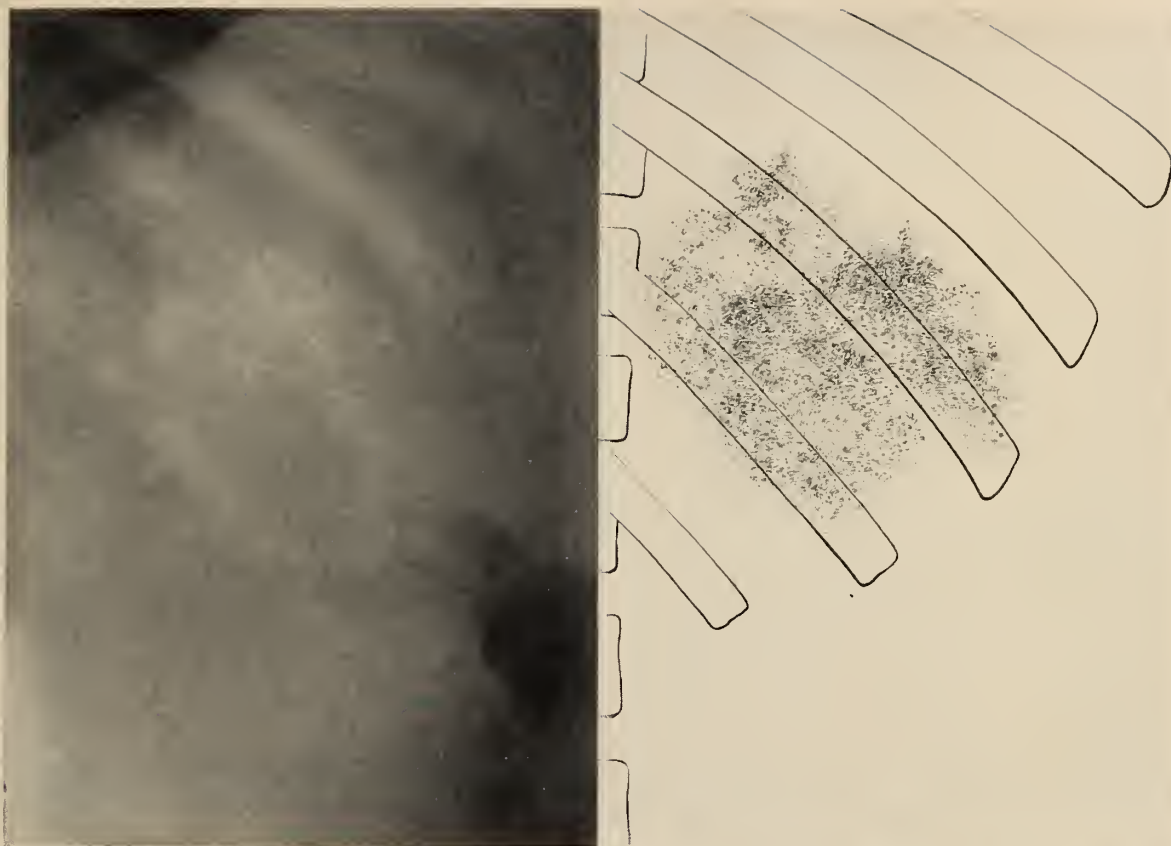


Figure 2.—Neuroblastoma containing calcium which produces a stippled or flaky appearance.

about the frequency of calcification in Wilms' tumor except to mention that it may occur.^{5, 9} In the present study, calcification was observed in two of the 17 Wilms' tumors (12 per cent). The incidence of calcification was much higher in neuroblastoma; it was present in eight out of the 14 cases (57 per cent). Wyatt and Farber noted calcification in six out of 34 cases of neuroblastoma, and Parsons and Platt¹¹ in two out of six cases (Table 2). The average age of patients with calcified neuroblastoma was three years; for those without calcifications it was 13 $\frac{1}{4}$ years.

The type of calcification in the two diseases differed. In the two Wilms' tumors, the calcium deposits were located in the peripheral portions of the mass and consisted of dense, homogeneous, concentric rings (Figure 1). In six of the cases of neuroblastoma the calcification had a stippled or flaky appearance, not limited to the periphery of the mass (Figure 2), and in the remaining two cases there was a conglomeration of the calcium deposits in the tumor so that they appeared to form a dense, well-circumscribed lesion.

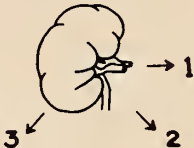
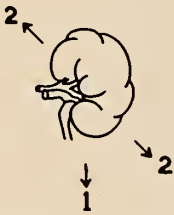
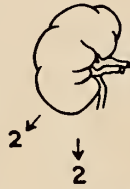
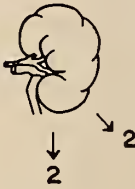
Urograms were obtained in all patients with Wilms' tumors. In 13 of the involved kidneys there was evidence of function: Contrast medium was pres-

TABLE 2.—Incidence of Calcification in Wilms' Tumor and Neuroblastoma

	Wilms' Tumor (Present Series)	Present Series	Neuroblastoma		Total
			Wyatt & Farber	Parsons & Platt	
Calcification	2 (12%)	8 (57%)	6	2	16 (30%)
No calcification	15	6	28	4	38

ent in the calyces and pelves after it was injected intravenously or subcutaneously. In four cases there was no roentgenologic evidence of function. The renal calyces and pelves were distorted in 10 of the 13 patients who had satisfactory renal function. One patient had only retrograde pyelograms, on which no evidence of distortion of the intrarenal structures was observed. The distortion in every instance appeared to be intrinsic in origin. The presence of distortion due to an intrinsic tumor was determined by the following: obliteration or elongation with either compression or dilation of a calyx; obliteration, dilation, or displacement of the renal pelvis and upper third of the ureter; and lack of evidence of excavation of renal parenchyma.

Urograms were made of ten patients who had neuroblastoma. The kidneys on the involved side functioned in all ten cases. Six of these patients had

	WILMS' TUMOR		NEUROBLASTOMA	
	Right	Left	Right	Left
Displacement				
	Yes 11 No 3		Yes 8 No 2	

Displacement of Kidneys in 11 of 14 Cases of Wilms' Tumor and in 8 of 10 Cases of Neuroblastoma

evidence of distortion of the intrarenal structures and four did not. The distortion, when present, consisted of displacement of the calyces without elongation, obliteration, or dilation of these structures.

Eleven of the 14 involved kidneys in patients with Wilms' tumor were displaced appreciably. The displacements were: Upward and medially in two cases, downward and medially in two cases, downward and laterally in five cases, downward in one case and medially in one case (see chart). Two kidneys were displaced beyond the midline. It is obvious that the direction of displacement depends upon the site of the tumor. The authors' opinion, however, differs from the findings of Ward¹⁰ who stated that renal tumors do not displace the kidney downward and medially.

Ward also stated that if a kidney is far removed from its normal position and functions well, the tumor may be benign and extrarenal. In two of the patients with Wilms' tumor in the present series the kidney was displaced beyond the midline and functioned well.

Eight of the ten patients with neuroblastoma had displacement of the ipsilateral kidney. In four cases it was displaced downward and laterally, and in four cases downward only.

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Mediastinal Tumors of Thymic Origin

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THE PROBLEM of thymic tumors has long been of great interest to clinicians and pathologists, no doubt owing to the incomplete knowledge about this gland. Many questions as to physiologic, pharmacologic, and pathologic factors lack conclusive answer. It is accepted that neoplasms of the thymus do occur and that the association of these tumors with myasthenia gravis is more than coincidental.^{1, 5, 6, 10, 15} The majority of these tumors in patients having myasthenia gravis must be considered benign. It appears obvious that malignant thymic neoplasms occur not infrequently, but they are rarely associated with myasthenia.^{9, 10, 11, 12, 13}

Seybold and associates¹⁴ questioned the thymic origin of many of the previously reported malignant thymic tumors, as they found practically all tumors which they considered to be of thymic origin benign in character, both pathologically and clinically. However, the observations of the authors in 21 cases of such tumors were not in accord with those of Seybold and co-workers; in all cases sections were examined microscopically by numerous pathologists and all the neoplasms were considered to be of thymic origin. In no instance was there evidence suggesting that any of them could have been of bronchial origin or a teratoid tumor or a lymphoblastoma. In cases in which postmortem study was carried out, the impression gained at biopsy was confirmed.

PATHOLOGY

Pathological classifications of thymic neoplasms have been numerous and inconsistent.^{2, 3, 4, 8, 16} Classification has been further confused by doubt over the origin of the small round cells in the thymus, now generally accepted as being lymphocytes.^{7, 8, 16} Lowenhaupt⁷ recently introduced a classification based on the epithelial derivation of the neoplasm, pointing out that most thymic neoplasms duplicate cell types seen in the stages of embryological development of the thymus and that a close relationship exists between the various groups. No classification can be entirely satisfactory, for in the

• Twenty-one cases of mediastinal tumors of thymic origin are presented. Five of these were benign and 16 malignant.

Surgical excision is proposed as the treatment of choice for the encapsulated benign tumors or for malignant tumors of limited extent. When surgical excision is not feasible, adequate roentgen therapy amounting to 5,000 to 6,000 r calculated tumor dose may eradicate or control the tumor.

No correlation between the histological pattern of the tumor and the survival rate or radiation response could be demonstrated in this small series.

majority of tumors there are varying histological structures throughout the neoplasms, but usually one type of pattern will predominate.

Lowenhaupt's classification is as follows:

- Group I. Carcinoma of primitive epithelial reticulum (Figure 1-A).
- Group II. Carcinoma of variegated cell pattern (Figure 1-B).
- Group III. Carcinoma of the granulomatous pattern (thymic Hodgkin's disease) (Figure 1-C).
- Group IV. Carcinoma of thymic round cells (Figure 1-D).
- Group V. Encapsulated thymoma (Figure 1-E).
- Group VI. Carcinoma of the adamantinomatous pattern (Figure 1-F).

Lowenhaupt felt that all groups must be considered malignant with the exception of Group V, which is benign. It appears that the vast majority of tumors reported in association with myasthenia gravis have been of this latter type and have shown lymphocytic infiltration which suggests greater maturity.^{7, 9, 10, 11, 12, 13}

In the present series the tumor was considered malignant in 16 of the 21 cases and they have been classified by Lowenhaupt as noted in Table I. Four tumors were unclassified because of wide variation in cell pattern. In autopsy examinations, performed in seven cases, extensive local infiltration was observed consistently, with extension into the neck region most frequently, and less often infiltration below the diaphragm. Rarely was extension into the axilla observed. In no case in the series was dis-

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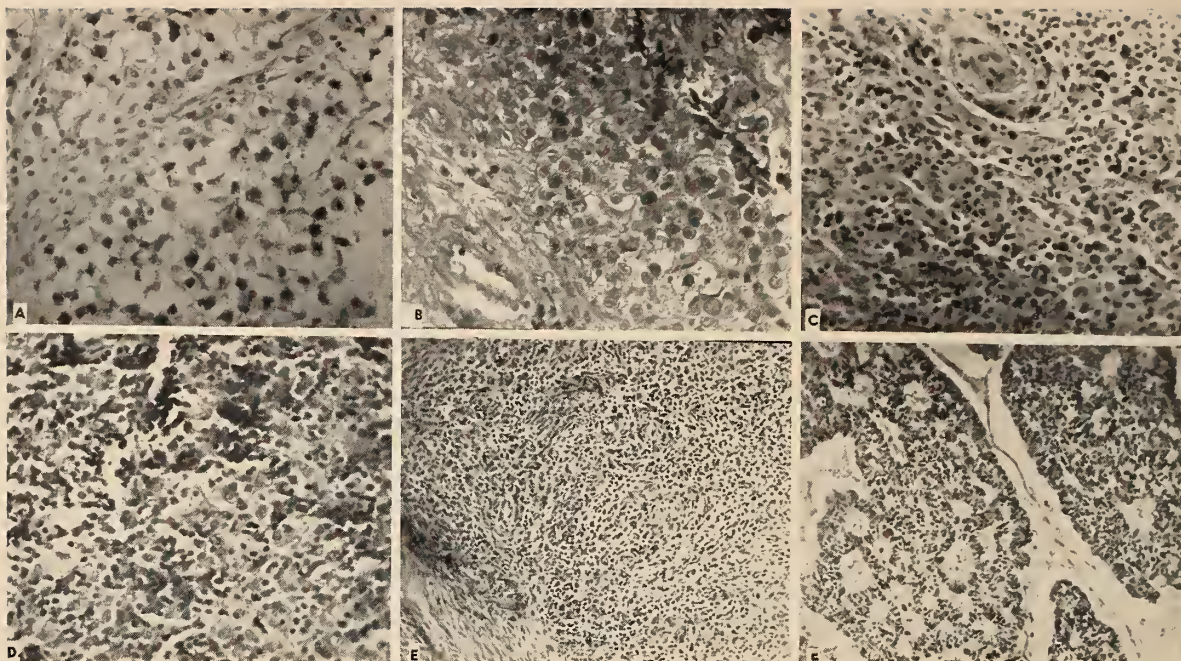


Figure 1.—*A*, Group I. Carcinoma of the primitive epithelial reticulum. This section, from the tumor in Case 1 (Table 1) shows the embryonal appearance and reticular nature of the cytoplasm of the tumor cells in this group.

B, Group II. Carcinoma of the variegated cell pattern. This section is from the same tumor as *A*, but shows the cell pattern seen in Group II. The fact that this picture came from a tumor which showed predominantly a reticular pattern indicates the close relationship of the various groups.

C, Group III. Carcinoma of the granulomatous pattern. This section, from Case 6, shows the lymphocytic and eosinophilic infiltration seen in this group of tumors.

D, Group IV. Carcinoma of the lympho-epitheliomatous pattern. This section, from Case 10, shows the lymphocytic infiltration and epithelial background of this group.

E, Group V. Encapsulated thymoma. Tumors of this group are seen most commonly in association with myasthenia gravis (Case 11).

F, Group VI. Carcinoma of the adamantinomatous pattern. It is felt that these cells spring directly from the primitive epithelial reticulum and that the pseudoglandular pattern can be explained by the close relationship of the anlage of the thymus to such neighboring organs as the parathyroids, salivary glands and enamel organs (Case 14).

tant metastasis noted, although such extension has been previously reported as an infrequent observation.^{3, 8, 16}

CLINICAL ANALYSIS

The present series comprises 21 proved thymic tumors seen at the University of California Hospital from 1925 to 1951, of which 16 were considered malignant and 5 benign. In all cases the diagnosis was made from pathological study of the excised neoplasm or of a biopsy specimen obtained at the operating table. Eight of the patients were between 20 and 30 years of age (Table 2), and only four were in or past the sixth decade. Sixteen patients were examined because of symptoms referable to a mediastinal tumor, but in five cases the presence of the tumor was observed radiologically in routine or survey chest films.

Two patients were considered to have myasthenia gravis in association with the tumor. A woman, 61 years of age, noted symptoms characteristic of myas-

thenia gravis for six months before admittance for study. A dose of 210 mg. of neostigmine bromide orally daily established satisfactory control. Following surgical excision of a thymoma in 1946, the patient was greatly improved and although she returned to strenuous farm labor she remained completely free of symptoms while taking a maintenance dose of 30 to 75 mg. of neostigmine bromide daily. Another woman, 58 years of age, had noted progressive loss of strength and diplopia for one year. Neostigmine was not given. A thymoma (Figure 2) was removed in 1945 and the patient had no further complaints. The diagnosis of myasthenia gravis in that case must be considered as presumptive. No other patients in the group had symptoms of sufficient magnitude to warrant a clinical diagnosis of myasthenia gravis.

Surgical excision was attempted in 14 of the 21 cases and in seven a biopsy specimen of the neoplasm was obtained. Four of the excised tumors were obviously incompletely removed and each of them was considered malignant. Five of the ten tu-

TABLE 1.—Clinical, Therapeutic and Pathologic Data on 21 Cases of Mediastinal Tumor of Thymic Origin.

Case	Age	Sex	Diagnosis	Group	Therapy	Follow-up	Autopsy Report	Remarks
1*	24	M	Carcinoma	I	Radiation 3000 r	Died 9 years after therapy	No remaining tumor	Specimen obtained from biopsy
2*	50	M	Carcinoma	I	Excision	Postoperative mortality	Local infiltration No metastases	Excision incomplete
3*	45	M	Carcinoma	I	Radiation 1000 r	Died 3 months after therapy	No autopsy	Specimen obtained from biopsy
4*	42	F	Carcinoma	I	Excision Radiation 2000 r	Died 1 year after therapy	No autopsy	Excision incomplete
5*	24	M	Carcinoma	I	Excision Neutron ther.	Died 5 months after operation	No autopsy	Excision incomplete
6*	24	M	Carcinoma	III	Radiation 5750 r	Alive 2 years after therapy		No evidence of tumor
7*	28	F	Carcinoma	III	Radiation 2500 r	Died 3 years after therapy	Extensive local infiltration. No distant metastases	Inadequate radiation due to erroneous initial diagnosis
8*	30	F	Carcinoma	III	Excision Radiation 1 yr. later; 3050 r	Alive 2 years after radiation		Secondary tumor in lung excised with primary tumor
9*	28	F	Carcinoma	III	Excision Radiation 3120 r	Cervical recur- rence, lt., 6 mo. rt. 9 mo.; radiation		Alive. No evidence of recurrence 2 yrs. after radiation
10*	23	M	Carcinoma	IV	Excision Radiation 3600 r	Recurrence 1 yr. after operation	Extensive local infiltration. No distant metastases	No tumor in areas irradiated at autopsy
11*	64	F	Thymoma	V	Excision	Symptoms improved		Clinical symptoms myasthenia gravis
12	46	F	Thymoma	V	Excision	Asymptomatic		
13*	58	F	Thymoma	V	Excision	Symptoms alleviated		Symptoms suggested myasthenia gravis
14*	40	M	Carcinoma	VI	Radiation 1945 3000 r Excision 1948	Postoperative mortality	Local infiltration No metastases	No regression of tumor with radiation therapy
15	63	M	Carcinoma	VI	Excision Tumor adherent to pericardium	Died 3 months after operation	Local infiltration No metastases	History recurrent pericardial effusion 3 years
16	63	M	Carcinoma	VI	Biopsy	Postoperative mortality	Tumor adherent to superior vena cava and pericardium	
17*	45	M	Carcinoma	VI	Excision	No recurrence in 5 years		
18	20	F	Carcinoma	?	Excision Radiation 5300 r	Asymptomatic 2 years after therapy		No evidence of tumor
19	33	M	Carcinoma	?	Radiation 2700 r	Died 2 months after therapy	No autopsy	Specimen obtained from biopsy
20†	37	F	Chori- stoma	Be- nign?	Excision	Asymptomatic 1½ yrs. postop.		Tumor located at interlobular septum
21	33	M	Cyst of thymus	Be- nign?	Excision	Asymptomatic 3 yrs. postop.		

* These cases previously reported by Lowenhaupt.⁷

† Case report to be published.

mors clinically completely excised were classified as benign. There were three postoperative deaths, two after incomplete excision of the tumor and one after excision of material for biopsy.

The majority of the operative procedures were done through a posterior lateral incision, which is the approach of choice especially for large tumors.

TABLE 2.—Age of Patients at Time of Study

Age	Total	Tumor	
		Benign	Malignant
20-30.....	8	0	8
31-40.....	3	2	1
41-50.....	6	1	5
51-60.....	1	1	0
61-70.....	3	1	2

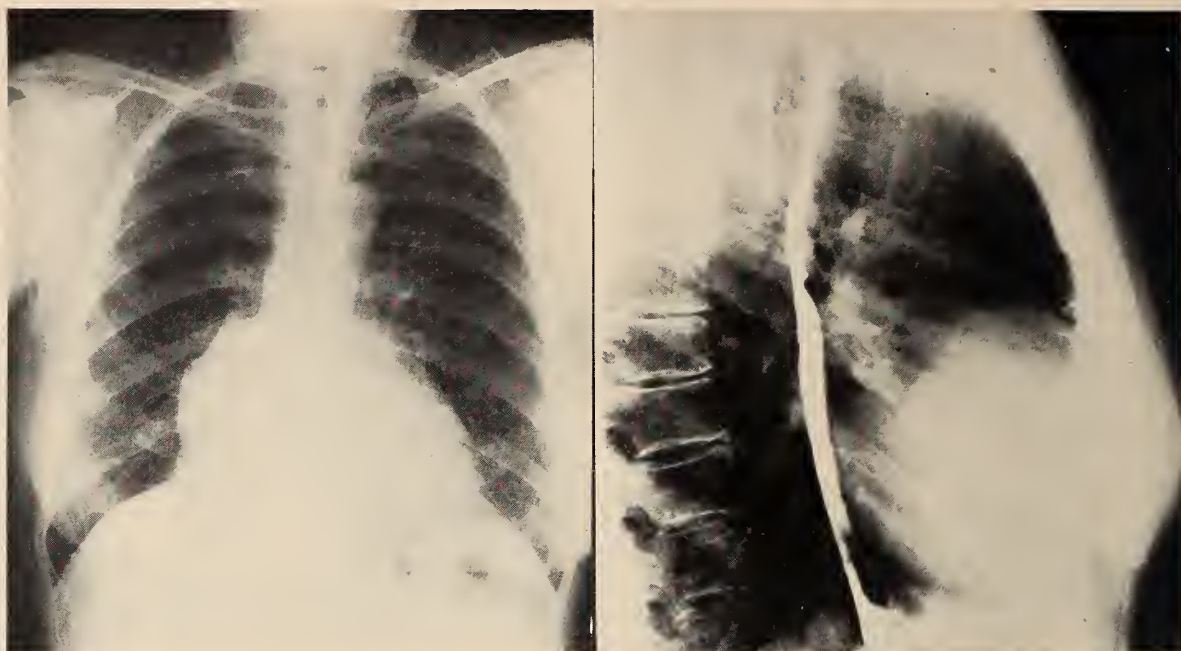


Figure 2.—Anterior mediastinal tumor best seen on the lateral projection (Case 13). Symptoms suggestive of myasthenia gravis were relieved by excision of the tumor which proved to be a benign thymoma.

The vertical or transverse sternal-splitting incision provides admirable exposure for all save the largest of tumors. In one instance a transverse sternal incision at the level of the nipples was combined with a necklace incision to expose the uppermost extension of the thymic tumor and the cosmetic result was excellent.

Roentgen therapy was given to 12 of the 16 patients with malignant thymic tumor. The pattern of therapy has varied considerably during the years of this study. In one case, neutron therapy consisting of 425 n through three separate fields was administered. Five patients received less than 3000 r calculated tumor dose in one series of treatments. In four cases 3000 to 3600 r was given over a period of 28 to 40 days. Recently the amount of radiation has been increased considerably and the last two patients treated by roentgen therapy were given a calculated tumor dose to the anterior mediastinum of 5300 r over a period of 38 days, and 5750 r in 48 days, respectively (Tables 3 and 4).

Of the 21 patients who were treated by operation or roentgen therapy, or both, ten were living, well and asymptomatic at the time of this report. Five of the ten were considered to have had benign tumors, three of them thymomas, one a thymic choristoma arising from a cell rest in the hilus of the left lung, and one a cyst containing thymic remnants in its wall. All of these benign tumors were completely excised, and the patients with thymomas had no evidence of recurrence five, six and eleven years after

operation. The thymic cyst was removed three years ago and the choristoma in the past year.

The remaining five living patients had tumors that were classified as malignant. Three were classified as Group III by Lowenhaupt, one as Group VI, and one was unclassified because of the wide variation of cell pattern throughout. Three of the patients were operated upon for removal of the tumor, but excision was incomplete in one case and radiation therapy was given postoperatively. The two patients

TABLE 3.—Treatment of Malignant Tumors

	Living	Died	Total
Excision alone	1	3*	4
Biopsy or excision plus x-ray			
<3000 r		6**	6
Biopsy or excision plus x-ray			
>3000 r	4	2†	6
Total	5	11	16

* Two died in postoperative period. ** One died in postoperative period. †No tumor found in treated area at autopsy.

TABLE 4.—Therapy of Malignant Tumors

	Alive	Dead
Complete surgical excision only.....	1	1
Clinically complete excision and roentgen therapy	1	1
Clinically incomplete excision and roentgen therapy	1	2
Biopsy and roentgen therapy.....	2	4*
Operative mortalities		3

* In one case no tumor was observed at autopsy 9 years after therapy.

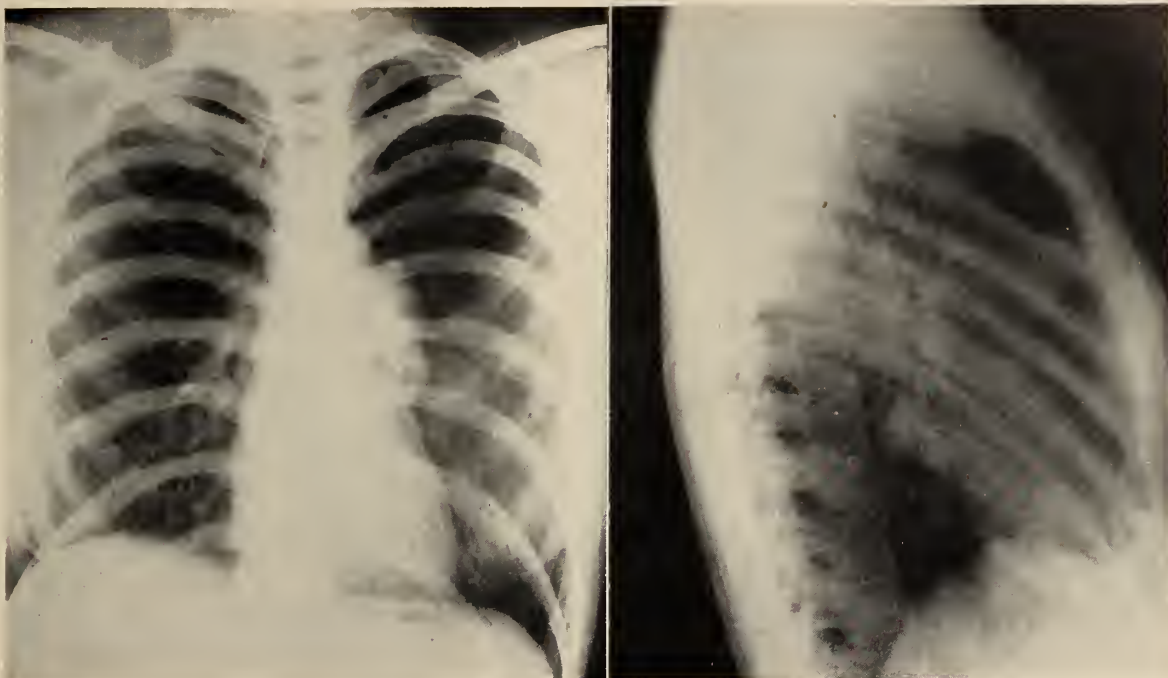


Figure 3.—Anteroposterior and lateral views of anterior mediastinal tumor which proved to be Group III (Case 8). A metastatic nodule in the left upper lobe not shown by x-ray was also excised at the time of removal of this tumor.

who were not operated upon had roentgen therapy after the nature of the tumor had been determined by biopsy.

One patient, a 30-year-old woman, had recurrence of tumor despite apparently complete excision. The seemingly encapsulated anterior mediastinal tumor (Figure 3) was relatively easily dissected free except for one area densely adherent to the pericardium which was excised with the tumor. In addition a circumscribed tumor 2 by 2 cm. in size in the upper portion of the left lower lobe was also resected. Both the primary and the metastatic nodule were considered malignant, but since they were grossly completely excised postoperative roentgen therapy was not given. A year later increased mediastinal density noted in an x-ray film of the chest was interpreted as a probable recurrence. Roentgen therapy was administered and the calculated mediastinal dose at the depth of the probable recurrence was 3020 r. At last report the patient had remained asymptomatic for two years after conclusion of therapy and no abnormality was observed in a film of the chest.

Complete excision of an apparently encapsulated tumor was readily accomplished in another patient, a 45-year-old man. The neoplasm was classified as a carcinoma of adamantinomatous pattern (Group VI). Postoperative radiation was not given. The patient remained asymptomatic and no evidence of recurrence was observed in a film of the chest more than five years after excision of the tumor.

Another of the three living patients with malignant tumors who were surgically treated, a 28-year-old woman, had a large anterior mediastinal tumor apparently arising in the right lobe of the thymus. The tumor was densely adherent to the innominate vein and vena cava and it was apparent that complete excision was not obtained. The left lobe of the thymus was identifiable in continuity with the tumor mass and was histologically normal, while the right lobe was replaced by tumor (Group III). Postoperative roentgen therapy was administered and the calculated tumor dose was 3120 r. Six months later a biopsy specimen was obtained from a left supraclavicular tumor mass which proved to be a recurrence of the thymic neoplasm. Roentgen therapy totalling 3922 r was given to this area and the mass disappeared. Three months later a small mass which appeared in the right supraclavicular area was also irradiated with a similar dose. This mass also disappeared and, at last report, two years after the last radiation therapy, the patient had no clinical evidence of recurrence.

One of the two living patients with malignant tumor who were not operated upon had a palpable mass in the left supraclavicular area at the time of admittance, in addition to a large mediastinal tumor visible in x-ray examination (Figure 4). After biopsy, roentgen therapy was administered. The calculated tumor dose in the mediastinum was 5750 r administered over 48 days and the dose to the left

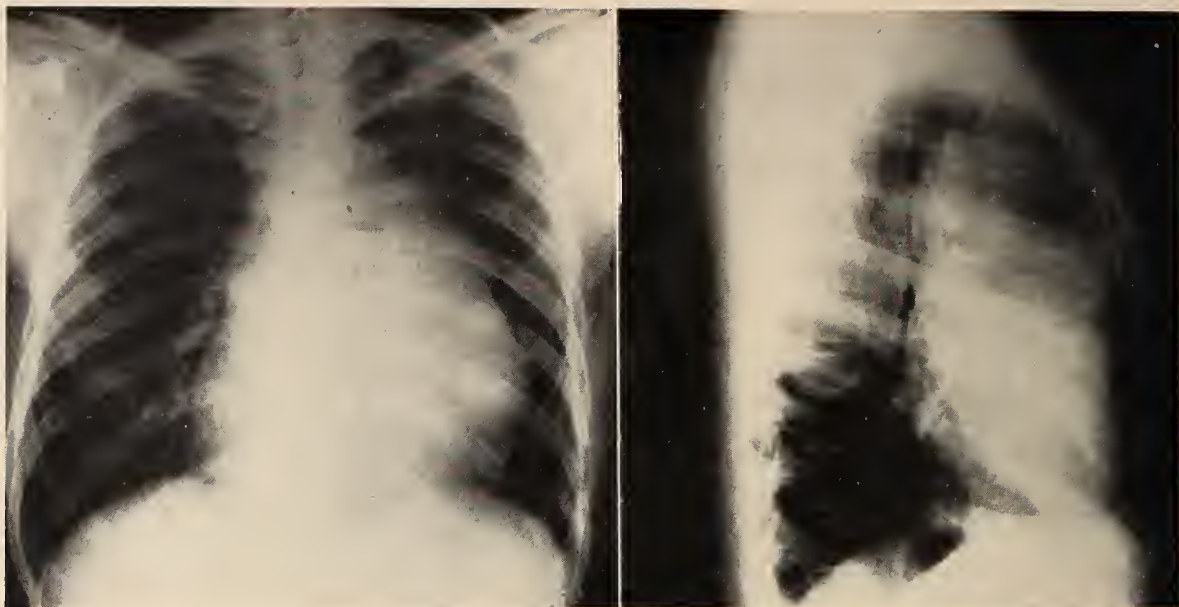


Figure 4.—Anteroposterior and lateral views of tumor classified as Group III (Case 6).

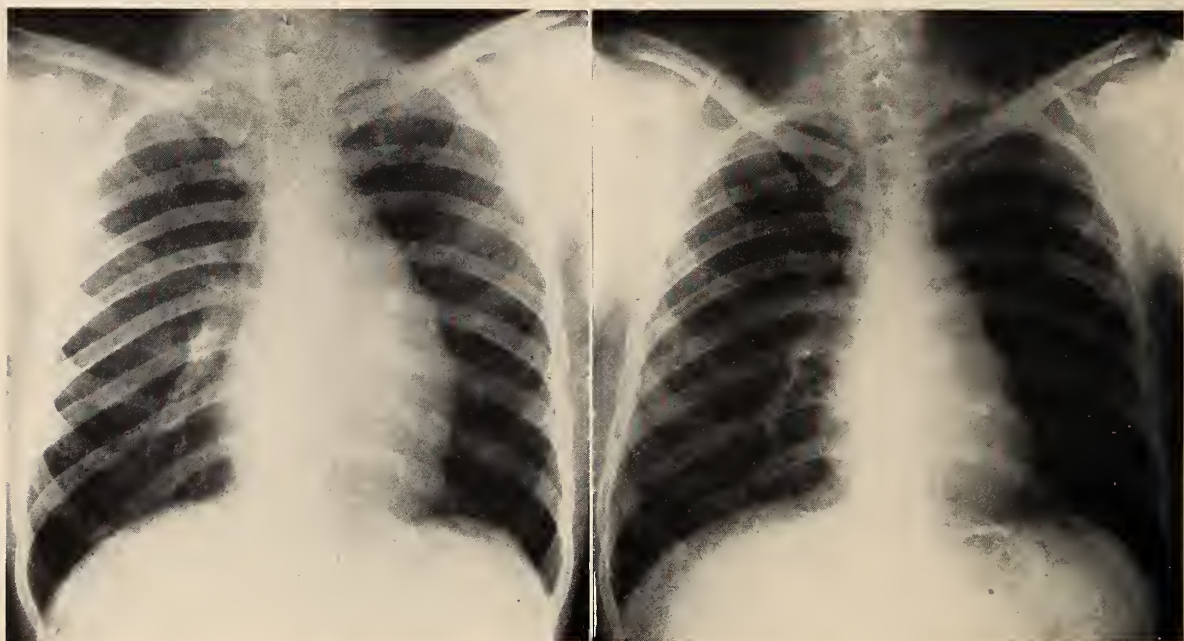


Figure 5.—Same patient as in Figure 4. *Left*, immediately after roentgen therapy of 5750 r calculated tumor dose. *Right*, complete disappearance of the tumor a year and a half later.

cervical area was 3000 r. The tumor rapidly regressed in size and at last report the patient had had no evidence of recurrence during the two years following completion of the radiation therapy (Figure 5).

The other of the two living patients with malignant growth who were not subjected to operation was a 20-year-old woman with a large anterior mediastinal tumor extending into the left supraclavicular

fossa. By biopsy it was diagnosed as a thymic carcinoma, as yet unclassified. Roentgen therapy was given. The calculated tumor dose was 5300 r administered over 38 days. There was no evidence of tumor growth two years after completion of the therapy.

Eleven of the patients with malignant thymic tumors died, three of them in the postoperative period, as was previously mentioned. It is worthy of note

that one of the three (who had a Group VI tumor) received roentgen therapy amounting to 3000 r three years preoperatively and 1350 r again one year preoperatively without noticeable change in the rate of growth of the tumor. The patient died a few days after attempted excision of the tumor.

One patient (with Group I tumor) who was treated early in the series lived nine years after completion of roentgen therapy of approximately 3800 r. Post-radiation fibrosis developed and it was complicated by bouts of massive hemoptysis. The patient died during exploratory thoracotomy done in hope of relieving the complication. At postmortem examination there was no evidence of residual tumor.

Another patient (with Group VI tumor) died three months after attempted excision of the tumor without receiving roentgen therapy. Two of the patients (one with Group I and the other with Group III tumor) who received over 3000 r died of extension of the disease, but at postmortem examination there was no evidence of tumor in the treated areas.

In four cases autopsy examination was not done. Three of the four patients received considerably less than 3000 r of roentgen therapy and one received neutron therapy as previously noted. In three of these cases the tumors were classified as Group I, and in the other the cell pattern was so variable as to be unclassifiable.

DISCUSSION

In this limited series no correlation can be demonstrated between survival rates and pathological pattern of the tumor, nor can any conclusion be drawn as to optimum roentgen therapy for the various classes of tumors (Table 5). However, observations in these few cases suggest that the neoplasms are primarily locally invasive and that remote metastases occur infrequently. Therefore, early adequate operation would appear to offer hope of good results, such as were obtained in the case of the one patient with malignant disease in the present series who had adequate excision.

The postoperative deaths in this series should not discourage the surgical approach, for two of them occurred early in the series before the advent of antibiotics and present-day anesthesia, and in the third case the patient was already moribund from superior vena cava obstruction. The authors believe that all undiagnosed anterior mediastinal tumors warrant surgical exploration and, if resection is not feasible, a biopsy of the tumor to determine the advisability of roentgen therapy.

The four patients surviving two or more years after radiation therapy all had calculated tumor doses of more than 3000 r, and study of those cases and the two cases in which no tumor was observed in the

TABLE 5.—Results of Treatment of Malignant Tumors

Classification	Treatment			Results	
	Excision	Excision & X-Ray	Biopsy & X-Ray	Living	Died
I	1*	2	2	0	5
III		2	2	3	1
IV		1			1
VI	2*	1	1*	1	3
Unclassified		1	1	1	1

* Postoperative death.

treated area at necropsy suggests that some of these tumors may be eradicable or controllable by roentgen therapy. In recent years 5000 to 6000 r has been administered over a period of 30 to 40 days with encouraging results.

As these neoplasms are not manifested by subjective complaints until they have reached a considerable size, diagnosis while they are in an early resectable stage will depend largely upon survey and routine x-ray examination of the chest. An unexplained mediastinal density should be viewed with a high degree of suspicion.

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Is it Neurosis?

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FOR SEVERAL YEARS, according to Levine,² it has been possible to speak of "major psychiatry" and "minor psychiatry" as we speak of major and minor operations. The major surgical procedures should be undertaken only by those who are fully trained and experienced, but it is recognized that there are also certain types of operation which can be performed by the practitioner with less specialized training with equally satisfactory results. An analogous situation exists in psychiatry: The great majority of nervous conditions fall into the "minor" category and do not require treatment by a specialist. This presentation is an attempt to give information that may be of value to the general practitioner in determining whether a patient has a functional disorder (neurosis).

It has been firmly established that every emotional conflict has some physiologic or organic concomitant, and it is also true that every organic disturbance causes emotional symptoms. Alexander¹ put it well when he said that theoretically every disease is psychosomatic since emotional factors influence all body processes through nervous and humoral pathways. He cited common physiological processes such as weeping, sighing, laughing, blushing, gesticulating and grimacing which can take place only under the influence of specific emotional situations.

Watts and Wilbur⁴ recently stated that any diagnosis in patients with functional disorders requires identification of symptom complexes resulting from functional disorders as well as from organic disease. Although they used the word "functional" throughout their discussion it is obvious that they were referring to disorders stemming from neurosis.

In recent years the terms "neurosis," "psycho-neurosis," and "psychoneurotic reaction" have become synonymous. All denote physiologic reaction to situational problems. It has been said that neurosis does not deny the existence of reality, it merely tries to ignore it. The reactions are unconsciously motivated, or at least they are out of voluntary control. The symptoms reflect individual ways of reacting to specific stresses and they vary according to constitutional equipment and experience of life. Neurosis stems from efforts to deal with specific difficult

• So-called "minor psychiatry," the treatment of neurosis in persons who are not psychotic, may well be undertaken by the general practitioner.

The first duty of the physician in dealing with a neurotic person is to determine whether psychosis may develop. He must be patient and thorough in hearing the history of the case and should have full information on the patient's life and family.

A recent classification of the neuroses is given and the more generally recognized symptoms of these conditions are described.

and anxiety-producing emotional problems. It is well to remember that all persons have emotional symptoms, but it is only when the symptoms are bothersome, or cause anxiety with physiological changes, that it becomes necessary to remedy them.

In dealing with a patient having symptoms of neurosis the most important thing for the physician to determine is whether the condition might develop into psychosis. In neurosis there is but little disorganization of the personality, whereas in psychosis the disorganization is relatively great. The inner experiences of a neurotic person do not upset the external behavior, but the behavior of a psychotic person may be entirely abnormal. It should be noted, however, that a diagnosis of psychosis can never be made on the basis of behavior alone. The thought content must be considered along with behavior deviations. In neurosis the grasp of social relations is not disturbed and there are no real delusions, whereas in psychosis frequently social adjustments are destroyed and true delusions occur. A person who is only neurotic has no disturbances of associations; there is no consistent or lasting deterioration of the intellect; insight is usually good and regression is not present or is only slight. In contrast, in psychotic persons, associations usually are distorted or impaired; deterioration of the intellect may be pronounced; usually insight is lacking, and, as in senile or parietic patients, regression may continue to the infantile level.

CLASSIFICATION

The general practitioner may have no great interest in the formal classification of the neuroses. However, one can recognize only that with which he is

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familiar. If a person knows little or nothing about the shadings in an x-ray film he will learn little or nothing from them. If signs of pathologic changes are pointed out to him in a film, he may recognize them but will still be unable to associate them with the total picture.

Applying the same logic to skin diseases, it becomes clear that the physician must know the type of rash or lesion to be expected before he can get a good idea of the diagnosis. This may be quite difficult at times. Differences of opinion may be expressed by even the most skilled of diagnosticians, but if they have sufficient knowledge of the classification of the diseases, diagnosis is made easier. Differences of opinion do not imply that a classification is not desired. Systematic arrangement tends to make for a more rapid absorption of content material.

The latest classification of the neuroses has appeared only recently. Doubtless the old terms will continue in use for many years to come. But no matter what nomenclature is adopted by the American Psychiatric Association, every effort should be made to adhere to the terms selected. This uniformity averts the misunderstanding and confusion which would otherwise result from the use of different terms by various groups or persons.

OLD TERMS	NEW TERMS
1. Hysteria	1. Anxiety reaction
a. Anxiety	2. Dissociative reaction
b. Conversion	3. Conversion reaction
2. Psychasthenia	4. Obsessive-compulsive reaction
3. Neurasthenia	5. Depressive reaction
4. Hypochondriasis	6. Phobic reaction
5. Reactive depression	7. Psychoneurotic reaction, other.
6. Anxiety state	
7. Mixed types	

The American Psychiatric Association has recently published a manual which includes the new nomenclature and indicates the old where changes have been made. Students of psychiatry will wish to consult this manual whether they are specialists or general practitioners. "Neurasthenia" and "hypochondriasis" are replaced by a new classification known as "psychophysiological reactions." "Anxiety reaction" replaces the old "anxiety hysteria" and "anxiety type." "Conversion reaction" replaces "conversion hysteria." "Obsessive-compulsive reaction" replaces the psychasthenias, and "depressive reaction" replaces "reactive depression." "Psychoneurotic reaction, other" permits other classifications if the examiner cannot place his findings in any of the stated categories. It replaces "mixed" type in the old classification. "Dissociation," as described by Noyes, is a mechanism to the employment of which the organism may resort in order to secure a measure of satisfaction when various components of the personality

are not well integrated. An aspect of the personality that is a source of emotional distress may thus be eliminated. Examples of dissociation are sleep walking, automatic writing, fugues and multiple personalities.

ETIOLOGY

An accurate diagnosis cannot be made without some idea of the causative factors. Books have been written in an endeavor to show that a neurotic patient is neurotic because he has a poor hereditary background, and still other books have been written to show that what happens to a person after he is born constitutes the deciding factor in the development of neurotic traits. It is reasonable to assume that both heredity and environment play a part. The constitutional factors may be compared to soil which may be rich or poor in qualities which make for the development of neurotic traits or tendencies; and the happenings of life, whether stresses, strains, tensions, conflicts, guilts, wishes, frustrations or violations of taboos, may be likened to the seed.

Continuing the analogy, it is recognized that there must be soil and there must be seed, and the seed must be dropped in the soil before there can be a disruption sufficient to disturb the person's tranquility. Emotional factors cannot be ignored as causes in the development of a neurosis, but neither can the constitutional equipment be passed over lightly. Many adherents to the psychoanalytic approach to the neuroses believe that they are basically derived from the conflicts that arose in childhood. Other experts differ with this theory. Probably everyone will agree that without psychological conflict neurotic symptoms would never develop sufficiently to cause disability.

SYMPTOMS

It has been said that a hysterical patient may have symptoms simulating those of any disease. This may be an exaggeration, but it gives an idea of the wide variation in symptoms in hysteria. The disturbances may be sensory, motor, visceral or mental. Where there is a multiplicity of somatic complaints without substantiating physical findings, or with bizarre findings, the diagnosis of hysteria must be considered. When anxiety, worry, fright, startle patterns and panic reactions are predominant, anxiety reaction is a more likely diagnosis. If there are compulsions, obsessions or phobias, the classification of obsessive-compulsive reaction is obvious. (A *phobia* is an intense fear associated with an idea, object or situation which tends to recur. *Obsessions* are thoughts of a distressing or unwelcome nature that tend to recur and are regarded as defensive in pur-

pose. *Compulsions* are usually confined to some action performed under an irresistible urge.)

The depressive reaction deserves special comment. It is always directly associated with some disturbing event in the life of a person who has been somewhat neurotic for years, and may follow a disappointment in love, financial reverses, severe illness, divorce, a death or any emotionally charged situation. There is always the possibility of suicide in such a case, and for this reason consultation should be obtained early, not necessarily with a psychiatrist but with any other physician.

DIAGNOSIS

No diagnosis of neurosis can be made without a good history of the case, and the physician should not expect to get a good history without devoting considerable time to listening. In many cases the diagnosis can be made, or at least a good lead obtained, by listening alone. It may be necessary to interject leading questions at certain points in order to get a longitudinal view of the patient. The physician must strive to get as much information from the patient, friends or relatives as possible, and this background must include the family history back at least as far as the grandparents. An attempt should be made to determine whether the childhood was happy or not, and whether the patient felt that he was loved, wanted and secure.

Certain highly significant traits have been designated as the "neurotic stigmata" of childhood. Any child may have some of them, but if a child has more than four or five it is quite probable that neurosis will develop. These traits are:

Fainting attacks	Stammering
Nail biting or picking	Thumb or finger sucking
Temper tantrums	Slow to walk or talk
Worry	Convulsions
Dizziness	Nightmares
Handicaps: crossed eyes,	Habit spasm
harelip, limp, etc.	Tics
Sleepwalking	Fears of: Dark, storms,
Sulking	heights, crowds, closed
Enuresis	places, animals, etc.

The physician should ascertain whether, as he grew older, the patient had a tendency to be shy, bashful, forward, seclusive, asocial, moody, depressed, or eccentric or had crying spells, whether it was easy or difficult for him to make and hold friends, develop hobbies and get along with others, and if not why not.

The following neurotic traits, although they sometimes occur in children, are more often observed in adults:

Headache	Backache	Muscle ache
Globus	Twitchings	Dermographia
Hyperhidrosis	Head noises	Insomnia
Formication	Tenseness	Anxiety
Introspection	Apprehension	Palpitation
Heart consciousness	Dyspnea	Numbness
Tremors	Anorexia	Fatigue

A few points in which neurotic symptoms differ from those of an organic nature should be kept in mind. If a patient has paralysis of some kind over which he has but little concern or anxiety, a functional element is to be suspected. When the complaint is of fatigue out of all proportion to the amount of physical effort performed and not owing to organic causes, neurosis should be considered. The time of onset of anxiety-producing symptoms is important, as there may have been some definite, unusual event which occurred such as head injury, personal loss, fever, infection, etc. The physician should be quick to note whether the symptoms are out of all proportion to the trauma, physical or mental, and to learn if the patient ever injured himself previously in a similar way. The inferences to be drawn are obvious.

Finally, it must always be remembered that there is no substitute for a thorough physical examination, whether it be for diagnosis or for therapy in neurosis.

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Measurement of Thyroxin Synthesis with I¹³¹

A Test for Evaluation of Thyroid Function in Equivocal States

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A CLASSICAL CASE of toxic goiter or of myxedema is not likely to require laboratory tests for diagnosis. Sufficient signs and symptoms are manifest in these states so that they are rarely overlooked by the physician. However, between these extremes of thyroid function there is a wide range of variation in activity of the gland, and within this range many cases of dysfunction are difficult to diagnose. Furthermore, hypermetabolic and hypometabolic disorders may be erroneously diagnosed as thyroid disease unless adequate laboratory studies are made. Laboratory procedures designed to aid in the correct diagnosis of thyroid disease are many, but few are simple enough for routine use and even fewer are sensitive enough for accuracy.

The test of basal metabolic rate as usually performed may give variable results. Particular attention must be given to the basal state of each patient, for even if conditions are ideal, diagnosis is often difficult in a given case because of the wide range of results in normal persons.^{1, 2}

Determination of the amount of cholesterol in the blood has proved of little value in the diagnosis of hyperthyroid states, although it is of some value as a control measure in the treatment of hypothyroidism. For this test also there is a wide range of normal values, and the results are not specific for thyroid disease.^{1, 9}

A similar criticism can be made even of the chemical determination of protein-bound iodine in the serum or plasma (Chart 1). Part of this lack of sensitivity may be attributable to the technical difficulties inherent in the analysis of extremely small amounts of iodine. In addition, conditions unrelated to thyroid abnormality such as pregnancy or nephrosis may cause results outside the normal range.^{6, 10}

It has been suggested that the concentration of circulating thyroxin is the best measure of function of

• As the function of the thyroid gland is the synthesis and secretion of thyroxin, a test which correctly measures this process is best for diagnosis of thyroid disorder and for determining the success of therapy. The rate of secretion can be measured with a Geiger counter which indicates what proportion of radioactive iodine in a serum specimen is in the form of thyroxin. The normal proportion is 2 to 10 per cent; in hyperthyroidism the proportion is 50 to 70 per cent, and in hypothyroidism less than 1 per cent.

The same test has served to detect metastases of thyroid carcinoma following total thyroidectomy.

the thyroid gland. However, the level of concentration is a result and not the prime determinant of the rate of synthesis of thyroxin. It is the measurement of the actual speed of synthesis and secretion of thyroxin which should prove a more accurate indicator of glandular function. Further, there is evidence that the protein-bound iodine consists of not only the active hormone, thyroxin, but also organic iodine compounds of undetermined calorogenic activity.⁴ Conditions increasing or decreasing the concentration of these other compounds in the blood could also contribute to the wide variation and overlap found in protein-bound iodine measurements.

Radioactive iodine has been widely used in recent years in the evaluation of thyroid function. With

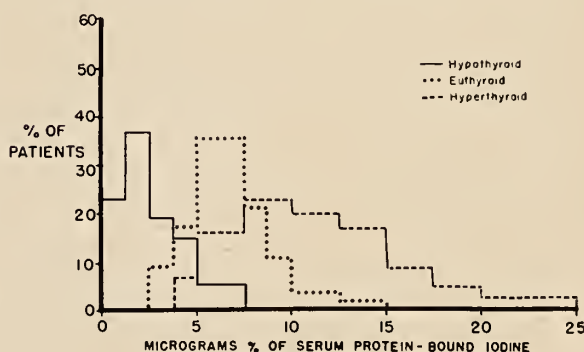


Chart 1.—Distribution of values for protein-bound iodine in the serum in 200 studies of patients with varying states of thyroid function. A significant degree of overlap can be observed.

From the Radioisotope Unit, Veterans Administration Hospital, Long Beach.

Reviewed in the Veterans Administration and published with the approval of the Chief Medical Director. The statements and conclusions published by the authors are the result of their own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

Presented before the Section on General Medicine at the 81st Annual Meeting of the California Medical Association, April 27 to 30, 1952, Los Angeles.

The radioiodine used in this investigation was supplied by Oak Ridge National Laboratory on authorization from the Isotopes Division, U. S. Atomic Energy Commission.

measurements of radioactive iodine, the limitations and variabilities of chemical methods of iodine analysis are avoided. Only emitted rays are measured. With the average Geiger counter less than a billionth of a microgram of radioiodine can be readily measured.

The measurement of the uptake of radioiodine by the thyroid gland over a period of 24 hours has been the most extensively used,⁸ but results just as good have been obtained recently with one-hour uptake tests.^{3, 5} However, difficulty is encountered in diagnosing cases even with uptake tests. The range of uptake in normal persons considerably overlaps the rates found in hypothyroid and hyperthyroid patients.⁷ Chart 2, showing the distribution of uptake values observed in some 500 studies, indicates that the uptake of circulating iodide by the thyroid is not always a measure of thyroid hormone formation and secretion and therefore may not accurately depict overall thyroid function.

Thyroxin is stored in the follicles of the thyroid gland in the colloid protein, thyroglobulin. Under the influence of the thyrotropic hormone of the pituitary gland, thyroglobulin is hydrolysed and thyroxin is secreted as the amino acid into the blood. This process may be followed with radioactive iodine, which serves as a label of the endogenous circulating iodide, tracing its movement through the sequence of reactions which lead to the secretion of thyroxin from the thyroid into the bloodstream. The thyroxin synthesis test is a measure of the speed with which these processes take place. The results of the test are expressed as the percentage of radioactive iodine in the serum which is in the form of thyroxin.

Twenty-four hours after the oral administration of 100 microcuries of carrier-free radioiodine a specimen of blood is obtained. The serum is analyzed for total radioactive iodine and for radioactive iodine in the thyroxin form. The analysis is performed by first treating the serum with an alkaline reagent and then extracting the thyroxin with normal butanol.

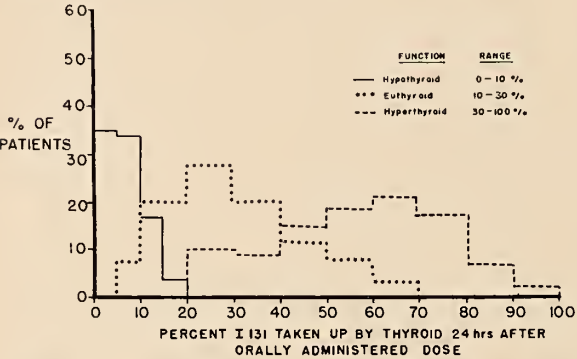


Chart 2.—Distribution of values for 24-hour thyroid gland uptake of radioactive iodine in 500 studies of patients with varying states of thyroid activity. Overlap is similar to that for protein-bound iodine.

The butanol extract is then washed with an alkaline reagent, which leaves the radioactive thyroxin in the alcohol layer. Only a 2 cc. sample of serum is necessary for the analysis. (Details will be published elsewhere.) As with other diagnostic techniques using radioiodine, previous intake of iodine-containing drugs can alter results.

The results in 500 studies of patients in the Veterans Administration Hospitals in Van Nuys and Long Beach are shown in Chart 3. Values in euthyroid persons range from 2 to 10 per cent; in most hyperthyroid persons the value is between 50 and 70 per cent; in nearly 95 per cent of hypothyroid persons it is less than 1 per cent, and the overlap between values found in euthyroid persons and those of patients with thyroid dysfunction is slight in comparison with the normal range. The diagnosis in all cases was based upon ultimate clinical outcome including therapeutic response in those with dysfunction. Each patient was first examined on the medical service, then referred to the metabolic ward of the radioisotope unit. After repeat examination, laboratory studies of thyroxin synthesis, of thyroid uptake and urinary excretion of radioiodine, of protein-bound iodine, and of blood cholesterol were made and the basal metabolic rate measured three times.

The sensitivity of the thyroxin synthesis test in indicating hypothyroidism and hyperthyroidism may be attributed, in part, to the fact that the turnover of circulating thyroxin rather than of a mixture of protein-bound iodine compounds is being measured. Chart 4 shows that the turnover of radioactive thyroxin differs from that of the non-thyroxin moiety of the radioactive protein-bound iodine,

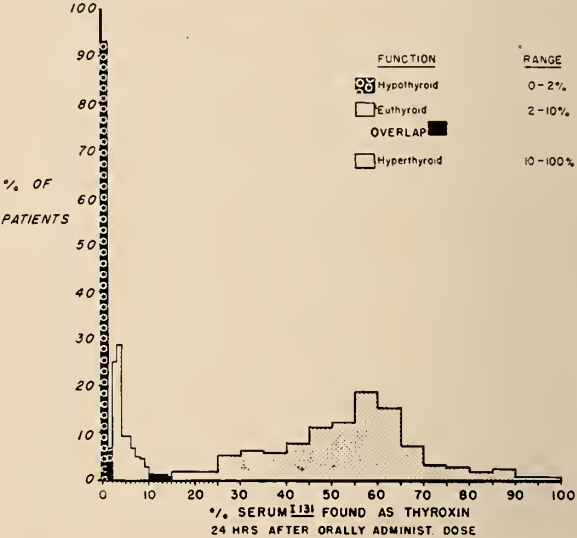


Chart 3.—Distribution of radiothyroxin synthesis values as found in 500 studies. There is relatively little overlap between different states of thyroid function.

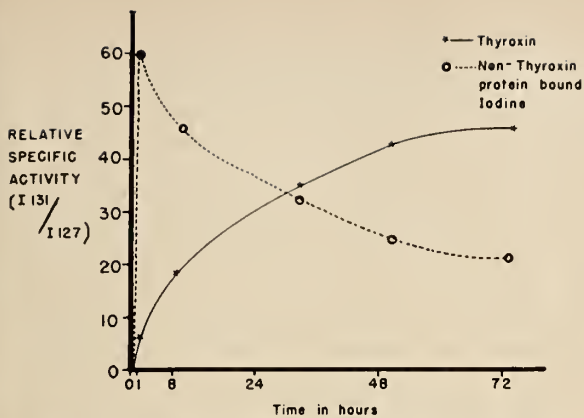


Chart 4.—The newly formed thyroxine, as measured with radioactive iodine, is shown to be different from the other organic iodine compounds in the protein-bound iodine of the serum in terms of its slower turnover rate.

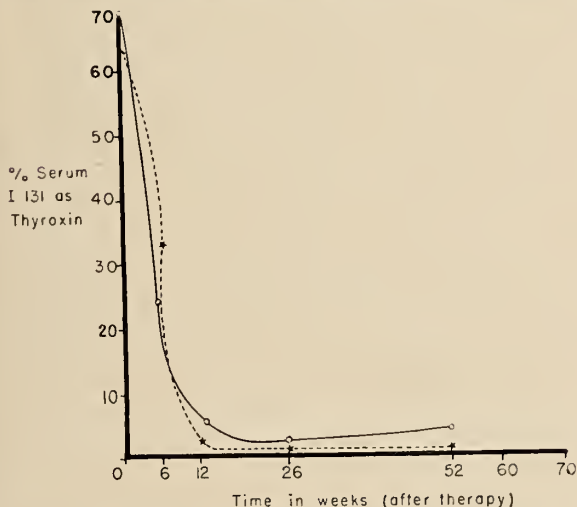


Chart 5.—Results of thyroxine synthesis determinations for two patients who received radioiodine for hyperthyroidism. The course of the patient traced by the solid line resulted in a euthyroid condition; that with the broken line depicts resultant hypothyroidism.

which appears to have a more rapid turnover than thyroxine.

Chart 5 shows thyroxine synthesis values in a patient treated with radioiodine for hyperthyroidism. Twenty-four hours after a test dose of I^{131} , 70 per cent of the radioiodine in the serum was in the form of thyroxine. On repeat test at the time of therapy a value of 69 per cent was obtained. Six weeks after the therapeutic dose the value was 24 per cent, indicating a definite therapeutic effect. At three months it was 6 per cent, and at six months 3 per cent. On follow-up one year after therapy a value of 4 per cent was obtained, still well within the euthyroid range. These results illustrate not only the separation between values found in hyperthyroidism and euthyroidism but also the constancy of the test as a measure of thyroid function and its usefulness in

TABLE 1.—Induction of Thyroxine Synthesis in Thyroid Carcinoma Metastases and Response to Radioiodine Therapy

Time (months)	Cumulative I^{131} (mC)	24-Hour Thyroxine Synthesis (%)
0	0*	3.5
2	37	10.0
4	106	14.0
10	296	1.5
12	452	0.6
16	552	0.2

* One week before total thyroidectomy and radical neck dissection.

following the results of therapy. By testing at proper intervals the need for additional therapy can be anticipated and thus considerable time may be saved in restoring the patient to a euthyroid condition. The sensitivity of the test in distinguishing hypothyroidism from euthyroidism is also shown in Chart 5.

In another patient with hyperthyroidism treated with I^{131} , the thyroxine synthesis value was 63 per cent before treatment. Six weeks after therapy it was 32 per cent; after three months, 2 per cent; after six months, 0.4 per cent, and after one year, 0.5 per cent. At the end of a year the patient had symptoms and signs of myxedema, which responded to treatment with desiccated thyroid.

In Table 1 are shown results demonstrating the sensitivity of the thyroxine synthesis test in detecting functioning metastases of thyroid carcinoma following total thyroidectomy, radical neck dissection and repeated doses of radioactive iodine. The metastases were so small that they could not be delineated by scanning techniques. The intermediate rise in thyroxine synthesis values was attributed to thyrotropic hormone stimulation of the metastases.

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Rheumatic Fever and Rheumatic Heart Disease

Incidence in California

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THE INCIDENCE AND IMPORTANCE of rheumatic fever and rheumatic heart disease in California are a matter of some controversy. Many observers contend that the incidence is very low, while others attribute the apparently low incidence to failure to diagnose the disease or to the benign character of it as it occurs in this state.

Richter⁶ in 1931 reported a study of heart disease in San Francisco school children in which she found the incidence of rheumatic heart disease about equal to the incidence of congenital heart disease. As there was no reason to expect a higher incidence of congenital heart disease here than elsewhere, it was concluded that the incidence of rheumatic heart disease must be low. Christie¹ in 1936 reported similarly that in children of school and preschool age with organic heart disease studied at the cardiac center of the San Francisco Department of Public Health, almost 50 per cent of cases were congenital in origin. His observations on patients admitted to the pediatric wards of the San Francisco and University of California hospitals, however, led him to conclude that the incidence of rheumatic fever was about the same as in other parts of the country, while the incidence of resultant heart damage was considerably less. He concluded therefore that the rheumatic process was relatively benign.

The incidence of rheumatic heart disease in children of school and preschool age in San Francisco and environs has been found by Sampson and co-workers⁸ to be 2.2 per thousand and Robinson and co-workers⁷ to be 2.43 per thousand—both relatively low figures. Davis and Rosin,² studying records of children admitted to Los Angeles hospitals, found the incidence of rheumatic fever lower than in most parts of the country but “consistent with that found in other subtropical areas.” A survey of the school children of five counties conducted in 1947 yielded reports of 572 cases of rheumatic fever among 108,000 children, an incidence of approximately 5 per thousand (the detail of the method and the reliability of this study are not known to the author). That there can be extreme variation in incidence between one locality and another is well illustrated by the report of Sampson and co-workers⁹ on the incidence

• The statistics quoted in this and other published reports appear to substantiate the impression that rheumatic fever in California, although still an important public health problem which varies widely from one locality to another, is of lower incidence and perhaps of more benign character than in most other parts of the United States. It also appears that in California aortic insufficiency may be of higher relative incidence and occurs more frequently as a clinically diagnosable sequel of rheumatic fever than does classical mitral stenosis. Congenital defects of the heart constitute a large proportion of the cases of organic heart disease in children and young adults in this state.

of heart disease and rheumatic fever in school children in three climatically different California counties. They found an incidence of rheumatic heart diseases and rheumatic fever as high as 20.4 per thousand in Eureka, as compared with 3.2 per thousand in Redlands—the latter figure much more in keeping with reported incidence in other areas of California. Morbidity and mortality statistics from public health records,¹⁰ crude though they may be, support belief that the over-all incidence in this state is low. Death from heart disease between the ages of five and nineteen years occurs in California at the rate of 6.3 per hundred thousand, the second lowest for any state.

It is in the young adult population that rheumatic and congenital heart disease is of greatest interest and importance, and it is in this group, apparently, that the least information is available. An opportunity was found in the medical examination of all newly registering students at the University of California, Berkeley campus, to study the incidence of heart diseases, rheumatic and congenital, in a young adult population and at the same time to form an impression of the relative incidence of these diseases in the state of California as based entirely on the stated place of birth of each student.

Each student registering at the university for the first time is required to enter certain biographical and medical data on a dispensary record card and is given a physical examination which includes an

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x-ray film of the chest. If the history is suggestive of rheumatic fever or heart disease, if any heart murmur or cardiac or cardiovascular abnormality is noted in physical examination, or if any abnormality is observed in the cardiac silhouette on the x-ray film, the student is examined further by a cardiologist. Careful history-taking, clinical and fluoroscopic examination and electrocardiographic readings are used for diagnosis. The Criteria for Diagnosis of Diseases of the Heart⁵ adopted by the American Heart Association are strictly applied.

The findings of the survey, which included all students entering the university for the first time in the fall semesters of 1949 and 1950, are given in Table 1. About half the students examined were native Californians, yet only 23.3 per cent of all students who had rheumatic heart disease were born in the state. Despite the relatively small number of cases upon which this study is based it appears, according to statistical probability tables, to be quite reliable. Among all students born in California, the incidence of rheumatic heart disease was only 1.24 per thousand, a remarkably low figure which differs very little from the observed incidence of congenital heart disease in California.

Are these figures for rheumatic heart disease credible? Studies made in other colleges and universities, for the most part by reviewing records of the past rather than by prearranged surveys, indicate in general a considerably higher incidence than that for California. For example, Hedley⁶ found the average incidence of rheumatic heart disease among students at fourteen colleges and universities situated in various parts of the United States to be 6.4 per thousand. On the other hand, if the statement by T. Duckett Jones is to be relied upon, that only 40 per cent of children who have had rheumatic fever have clinically demonstrable heart disease upon reaching college age, then the incidence of 1.24 per thousand for rheumatic heart disease for California natives seems quite in line with the figures cited above on the incidence of rheumatic heart disease among California children of school age and younger. It is to be noted, of course, that the screening method and the strict criteria applied in this study make the figure a minimum one.

Another interesting observation was made in the course of this study: Aortic insufficiency was diagnosed in almost 50 per cent of all the cases of proven rheumatic heart disease. It was observed that in this survey, as in examination of students at the University of California generally, aortic diastolic murmur was more often noted than the presystolic and diastolic murmurs associated with mitral stenosis. This observation agrees closely with that of Levy, Stroud and White⁴ on the reexamination by cardiovascular specialists of 4,994 men from four major cities in

TABLE 1.—Incidence of Heart Disease in Students Registering at University of California, 1949-1950

	Totals for 1949 and 1950		
	Number	Per cent	Per cent born in California
Total registering students.....	11,096	100.00	50.9*
Referred for cardiac study.....	378	3.41	
Chronic rheumatic heart disease	30	0.27	23.3
Mitral valve involved.....	20		
Aortic valve involved.....	14		
Mitral and aortic valves involved	5		
Congenital heart disease.....	12	0.11	58.3
Total proven heart disease.....	42	0.38	
Possible heart disease.....	26	0.23	50.0
Physiologic murmurs	291	2.62	55.3
Other (arrhythmias, etc.)	19		

* Estimated from a random sample obtained by noting birthplace of every fortieth registrant in the order in which they reported for processing at the Student Health Service.

the United States who were disqualified for general military service. In this reexamination it was found that the men from San Francisco, where there is a relatively low incidence of rheumatic heart disease, had a higher incidence of aortic insufficiency than of any other valvular lesion—a finding quite different from that in the three other cities.

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Primary Pulmonary Resection for Tuberculosis

Medical and Economic Aspects in a Small Sanatorium

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and DAVID DUGAN, M.D., *Oakland*

IN THE PAST THREE YEARS pulmonary resection has been used in an increasing proportion of cases at Bret Harte Sanatorium, a 230-bed hospital operated by San Joaquin County for tuberculous patients. Since the acceleration of the program, data have developed that permit comparison of results of resection with those obtained in the same hospital by thoracoplasty and by extrapleural pneumothorax. Also some light is cast on medicoeconomic factors with regard to the three methods.

Data on the length of time between treatment and the disappearance of tubercle bacilli from the sputum—"conversion"—are given in Table 1. It is noteworthy that 75 per cent of the patients subjected to resection had conversion within two months, whereas in the thoracoplasty group only 15.3 per cent had conversion in that length of time. (Not included in the table are the nine cases in which resection was done most recently. In all of them conversion occurred within two months, making 31 two-month conversions in a total of 37 patients who had resection.) Results obtained with extrapleural pneumothorax cannot be equitably compared with results in patients treated by thoracoplasty, of course, for pneumothorax was used for patients in whom the conversion rate would have been relatively high whatever the method of treatment.

It is still too early to gauge the long-term results of resection or to say what the future of the program will be. It is perhaps indicative, however, that 23.3 per cent of patients who had thoracoplasty and 10

• *Twenty-eight patients with pulmonary tuberculosis in a small, tax-supported sanatorium were treated by primary pulmonary resection. In a comparison of results with those obtained in the same sanatorium by thoracoplasty and extrapleural pneumothorax, it was noted that in general the patients who had resection had earlier conversion of sputum to "negative" and had a shorter stay in hospital.*

Complications were not of sufficient frequency to contraindicate use of resection in cases in which there was doubt that thoracoplasty would be effective.

The cost of hospitalization for surgical treatment and postoperative care was considerably less when resection was done than it was for either three-stage or two-stage thoracoplasty.

per cent of those treated by extrapleural pneumothorax did not have conversion of sputum to "negative," whereas all living patients in whom resection was done had conversion before they left the sanatorium.

Charts 1 and 2 show the number of operative procedures in each of the three categories and the relative frequency of use of each method. Decreases in thoracoplastic and extrapleural procedures since 1949 have been more than compensated for by an increase in resections. Since thoracoplasty is done in stages whereas resection takes but one operation, the total number of operations has decreased. Also in the last two years thoracoplasty has been done more often in two stages rather than three as previously (without change, however, as to the number of ribs removed).

In recent years a higher proportion of patients admitted have been treated surgically (Table 2). There are two reasons for this. One is that the three surgeons who carry out the procedures have been operating four times a month since 1950, as against twice monthly theretofore. The other is that during the last three or four years there has been a gradual increase in the number of patients who, because of chronic alcoholism or mental instability, are not

TABLE 1.—Sputum Conversion Rates Concomitant with Various Methods of Treatment

Conversion Months Postoperatively	Thoracoplasty (124 cases)	Extrapleural	
		Pneumo- thorax (76 cases)	Pulmonary Resection (28 cases)
0-2	15.3*	30.0*	75.0*
2-4	11.5	12.0	4.2
4-6	8.6	26.0	4.2
Total within 6 months.....	34.4	68.0	83.4
Over 6 months.....	42.3	22.0	8.2
Not converted	23.3	10.0	8.2

*Expressed in per cent of cases in which sputum converted to negative from positive in stated period.

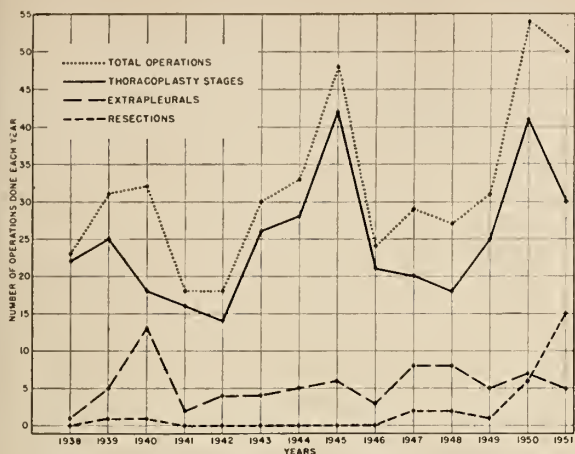


Chart 1.—Total number of operations and the numbers of each kind in period 1938-1951 inclusive.

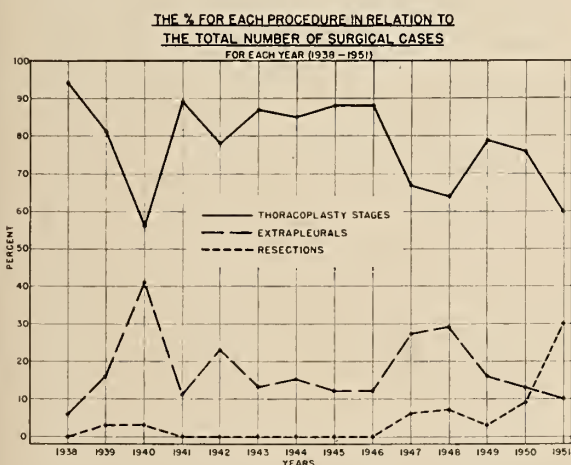


Chart 2

suitable candidates for a regimen based upon a reversible collapse procedure, which necessitates co-operation on their part.

The question of how long a patient is to stay in the sanatorium is difficult to answer, since in most institutions the availability of beds is a strong factor. At Bret Harte the preoperative care of patients who are to have resection is the same as that in most institutions, but postoperative care is somewhat different. Patients are advised before resection that no matter what the results of the operation, they will have to remain in bed for six months postoperatively. The reason for this is that, in the operation, attempt is made to preserve all but that portion of the lung which cannot be collapsed by surgical or other means. If at the time of operation a few nodules are felt in the remaining lobes, the surgeons leave them unless there is cavitation. In no case have there been complications attributable to rest in bed postoperatively. In a few instances patients who felt

TABLE 2.—Number of Patients Operated Upon in Relation to Number Admitted During Year

Year	Proportion Operated Upon (per cent)	Year	Proportion Operated Upon (per cent)
1938.....	15	1945.....	30
1939.....	19	1946.....	14.7
1940.....	19.3	1947.....	15.6
1941.....	12	1948.....	13.6
1942.....	12.4	1949.....	16
1943.....	18.7	1950.....	24.5
1944.....	20	1951.....	22.2

well could not be made to stay in bed for the prescribed period.

Postoperative chemotherapy as practiced at Bret Harte may differ from that in many institutions in that patients are given streptomycin intermittently and para-aminosalicylic acid daily for three months. The average length of stay in the sanatorium following resection was 11 months, as against 12 months after extrapleural pneumothorax, and 15 months after thoracoplasty. It is recognized, however, that the resection series is so small (28 cases) that definite conclusions are not warranted.

COMPARISON OF COSTS

Valid comparison of the costs of the various kinds of operation can be made, however, if it be assumed that in a given case either thoracoplasty or resection could be used. Patients at Bret Harte Sanatorium must be transported 75 miles to a general hospital for any major operation, and the hospital charges the county a set rate daily, based upon the cost of caring for patients undergoing operation at that institution. The average bill to the county for patients who had resection was \$340, against \$800 for three-stage and \$512 for two-stage thoracoplasty. For extrapleural pneumothorax the cost was \$258. The comparison of costs, it should be noted, came after the fact; the differences in cost were not a factor in choice between procedures. The staff is keenly interested, however, in avoiding trial thoracoplasty for a patient who would be better served by resection. Of 37 resections done up to the time of this report, only three were in cases in which thoracoplasty had been done earlier—before 1944 in two instances. One was in a case in which extrapleural pneumothorax had failed.

The indications for resection in the group of 37 patients were as follows: Bronchostenosis, totally destroyed lung, giant cavities, bronchiectasis, lower lobe cavities, nonexpansile lung with cavitation still present, cavitation which might not have closed with thoracoplasty, failure of thoracoplasty, and failure of extrapleural pneumothorax. Of the 37 patients, ten had upper lobe lobectomy with concomitant thoracoplasty. In three cases in which pneumonec-

tomy was done, the remaining pleural space was filled with air, and refilling was done from time to time for periods up to two years with no complications. In two other cases, the pleural space was allowed to fill with serum and no postoperative thoracoplasty was done. In two cases concomitant thoracoplasty was carried out.

COMPLICATIONS

Complications following resection were not such as to change the authors' belief that upper lobe lobectomy, with concomitant thoracoplasty, is to be preferred in suitable cases over thoracoplasty alone. Nor was the factor of complications of sufficient weight, all things considered, to gainsay primary resection in cases in which thoracoplasty might not be effective. The complications that occurred in the first 28 resections done are listed in Table 3. (No complications occurred in the next nine resections.) Bronchopleural fistula occurred in four cases—in two instances before the advent of streptomycin. Two of the four patients in whom fistula developed died (one in the prestreptomycin era and one after

TABLE 3.—Complications Associated with Surgical Procedures

	Thoraco- plasty (124 cases)	Extrapleural Pneumo- thorax (76 cases)	Resection (28 cases)
Wound infection	14	0	1
Contralateral spread	6	4	2
Ipsilateral spread	2	1	0
Respiratory disability, dyspnea..	2	0	0
Bronchopleural fistula	0	0	4
Rapid reexpansion	0	1	0
Postoperative death (within 60 days)	5	0	0

the drug became available); the other two are alive and well with the fistula closed. In the two cases in which contralateral spread occurred, the patients had left the sanatorium against medical advice within three and a half to four months postoperatively. Both were back within three months after leaving, and one of them died. The four patients in whom fistula developed and the three who died had had pneumonectomy. Taking two months postoperatively as a time limit, there were no postoperative deaths in the resection or extrapleural group, five in the thoracoplasty group.

Bret Harte Sanatorium, Murphys.

Primary Carcinoma of the Duodenum

HAROLD P. TOMPKINS, M.D., Los Angeles

ALTHOUGH TUMORS of the small bowel are relatively rare and therefore not of uppermost interest statistically, that they do occur must be kept in mind, for the only hope for a patient with malignant disease of the duodenum lies in early diagnosis and prompt, adequate excision. Bennett¹ recently reported upon three patients who lived more than ten years after removal of carcinoma at that site.

Numerous studies of autopsy series have been made to determine the incidence of primary duodenal carcinoma. Hoffman and Pack,² in a review of 350,286 autopsy reports, noted that the incidence was 33 per 100,000 (0.033 per cent), and other reports are in close agreement.

As such tumors are rare and they develop insidiously, preoperative roentgen diagnosis is made in only about 25 per cent of cases—and no other method of diagnosis approaches even that degree of accuracy.

The lesion can occur at almost any age, but the incidence is highest in persons between 50 and 70 years of age. The disease affects two or three times as many males as females.

The tumor's may originate in any portion of the duodenum. Approximately 22 per cent occur in the suprapapillary portion—the area above the common duct opening which is divided embryonically from the foregut. Some 60 per cent originate in the peripapillary region, where the tumor may rise from the ampulla of Vater, from the duodenum proper, from the pancreatic duct, or from the terminal portion of the common bile duct. The variety of tissue sources probably accounts for the preponderance of tumors there. About 18 per cent grow from the infrapapillary portion.

In most cases of this insidiously developing tumor, the patient has a history of fairly good health with no symptoms related to the gastrointestinal tract until about a year before diagnosis. Anorexia and loss of weight may be noticed for three to six months. Pain in the right upper quadrant of the abdomen may be a complaint, and the pain may be followed by or associated with epigastric fullness which is relieved by belching. Constipation may be a late symptom.

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• As the only hope for patients with malignant disease of the duodenum depends upon early diagnosis and prompt and adequate operation, suspicion must be alert even though the condition is relatively rare. The incidence is highest in persons between 50 and 70 years of age, and two or three times as high in males as in females.

The onset is insidious. The patient usually gives a history of fairly good health and no other related symptoms until about a year before diagnosis. Early symptoms are loss of appetite, loss of weight, and moderate pain in the right upper quadrant of the abdomen, sometimes associated with epigastric fullness which is relieved by belching. Vomiting and constipation are late symptoms. There may be occult blood in the stools, moderate anemia in some cases, and frequently jaundice.

The radiological findings are irregularity of the mucosal pattern in the region of the tumor and often constriction of the involved portion of duodenum.

A report is made herein upon four cases of primary carcinoma of the duodenum observed at one hospital in a period of only a little more than two years.

Often noted are moderate anemia and occult blood in the stool. Gross melena has been reported, but it is not usual. Jaundice and, all too frequently, a palpable mass may be noted upon physical examination.

Histologically, the lesions usually are carcinomatous. Annular constricting lesions appear to be more frequent in the first and second portions of the duodenum, while large fungating, ulcerating and polypoid lesions are more often found in the third portion. Involvement of the ampulla of Vater is not common. Lesions of the second portion, of course, most often cause jaundice.

Metastases, although they occur relatively late, are found in approximately 30 per cent of all cases. The spread is first to regional nodes, then to the liver, lungs and bones.

Etiological factors are to a large degree speculative. There appears to be some controversy as to



Figure 1 (Case 1).—Apparent filling defect in third portion of duodenum.



Figure 2 (Case 2).—Apparent ulcerating defect at junction of second and third portions of the duodenum.

No masses were palpated in the abdomen. Erythrocytes numbered 4,000,000 per cu. mm. of blood and the hemoglobin content was 15 gm. per 100 cc. In roentgen studies of the gastrointestinal tract an old duodenal ulcer and a lesion in the third portion of the duodenum were observed (Figure 2).

whether carcinoma of the duodenum can arise from chronic ulceration of the bulb, but the preponderance of opinion seems to be that that is not a factor. The presence of impacted gallstones has been thought to account for the lesion in some cases. Abrupt changes in the chemical composition of the secretions that bathe the duodenal mucosa may play a small part.

Radiographically observable abnormalities associated with duodenal tumors are irregularity in the mucosal pattern in the region of the lesion, narrowing of the lumen in the case of constrictive lesions, and filling defects within the lumen caused by polypoid or bulky lesions. Various degrees of constriction of the duodenum cause corresponding dilation of the duodenum proximal to the lesion. Even the stomach may be dilated if the obstruction is severe.

Following are reports of four cases of proven primary carcinoma of the duodenum observed at the Queen of Angels Hospital between May 1949 and July 1951.

CASE 1: A 75-year-old white man was admitted to the hospital May 15, 1949, with the complaint of obstipation. Constipation had developed gradually over the preceding three or four years, but rectal operation of minor nature had largely relieved the condition until two months before admittance.

The patient was well developed, but poorly nourished. He was mentally alert, but appeared to be ill. The abdomen was soft. In a sigmoidoscopic examination no significant pathologic change was noted. The colon appeared to be normal roentgenographically also. In films of the upper gastrointestinal tract, a widened duodenal loop with a partially obstructing lesion of the third portion were noted (Figure 1). The appearance of the small bowel was that associated with a deficiency state. Erythrocytes numbered 3,277,000 per cu. mm. of blood and the hemoglobin content was 10.7 gm. per 100 cc.

Upon exploratory laparotomy an iliac mass of retroperitoneal nodes was observed. The small bowel, liver, stomach, gallbladder, spleen and kidneys were examined by the surgeon and were considered normal. A specimen was excised from the retroperitoneal nodes, and the pathologist reported "adenocarcinoma, metastatic."

Autopsy was done August 15, 1949. The stomach was dilated. In the third portion of the duodenum, distal to the ampulla and not connected with it, was an ulcer 3 cm. in diameter.

The final diagnosis was ulcerative adenocarcinoma of the duodenum with retroperitoneal lymph node metastases, adrenal metastases and metastatic nodules in the ileum and jejunum.

CASE 2: A 58-year-old white male physician was admitted to the hospital January 21, 1951. The patient, a member of the hospital staff, had complained of progressive loss of weight over the preceding two years. He had had a duodenal ulcer, with symptoms, since 1936. For six months before admittance the patient vomited late after meals and had a constant feeling of distention, but very little pain. There was no history of gastrointestinal bleeding or of any symptoms referable to the bowel. The patient complained of considerable nausea and anorexia with progressive weakness and exhaustion. There was no history of jaundice.

On January 24, 1951, a Whipple-type resection was done. A duodenal ulcer was observed, and separate and distinct from it was a mass in the third portion of the duodenum with involvement of the adjacent lymph nodes. The pathologist who examined the material diagnosed duodenal ulcer and primary adenocarcinoma of the third portion of the duodenum with regional lymph node metastases.

The patient did not recover well, and although he was able to leave the hospital he died within a few months.

CASE 3: A 35-year-old white policeman was admitted to the hospital June 21, 1951, with complaint of chills and fever with gastric discomfort. Six weeks before admittance the patient had had chills and fever for about three days and then had gone back to work. Several similar attacks occurred. The night before admittance, chills and fever recurred—this time with vomiting. The vomitus was dark brown. The patient had no appetite and noted a feeling of fatigue and general weakness.

Upon physical examination slight icterus of the sclera was noted. There was no abdominal tenderness, the liver was not palpable and the spleen did not seem to be enlarged.

The diagnosis was infectious hepatitis.

Results of agglutination tests were negative for typhoid, paratyphoid and brucella. Erythrocytes numbered 3,100,000 per cu. mm. of blood and the hemoglobin content was 9 gm. per 100 cc. In a survey film of the abdomen made August 30, 1951, there was indication of gas in the colon with some air-filled and partially distended loops of small bowel in the right lower and right central portions of the abdomen. In gastrointestinal roentgen study made elsewhere before the patient was admitted to the hospital, there was no evidence of any lesion of the upper gastrointestinal tract.

A diagnosis of cancer of the head of the pancreas was made and operation of the Whipple type was carried out. An ulcerative tumor mass which lay 8.5 cm. distal to the pylorus protruded into the lumen of the duodenum and encircled the ampulla of Vater. The pancreas was not involved. The pathologist's diagnosis was obstructive adenocarcinoma at the ampulla of Vater with extensive lymphatic herniation and regional lymph node metastases.

The patient recovered from the operation sufficiently to go home in fairly good general condition but was later reported to have entered a Veterans Administration hospital. His condition then was considered hopeless and he died October 15, 1951.

CASE 4: A 52-year-old white woman was admitted to the hospital July 16, 1951, with complaint of a mass in the epigastrium which had been noticed for the previous six or eight weeks. There had been epigastric discomfort with considerable distention after meals for approximately two months before admittance. The patient had found that massaging the gastric area gave some relief, and in massaging had felt the mass, which was moderately tender. There was no history of jaundice or of previous gastric disturbance. The body weight had decreased approximately five pounds since the onset of symptoms.

The patient's father died of carcinoma of the stomach.

The hemoglobin content of the blood at the time of admittance was 13.4 gm. per 100 cc. In roentgen study of the



Figure 3 (Case 4).—Mass displacing lesser curvature of stomach and causing distortion of distal portion of duodenum and adjacent jejunum.

upper gastrointestinal tract, a large mass displacing the lesser curvature and the distal portion of the duodenum was observed (Figure 3).

On July 17, the duodenum and 14 cm. of the jejunum were resected and anastomoses of the jejunum with the pyloric end of the stomach was carried out. The common bile duct and the duct of Santorini were transplanted. The pathologist's diagnosis was ulcerative mass at the ligament of Treitz. The mass encircled the distal end of the duodenum, and there was enlargement of lymph nodes in the area. Upon histologic examination the mass was observed to be adenocarcinoma of the fourth portion of the duodenum, with extensive regional lymph node metastases. The patient died September 4, 1951.

658 South Westlake Avenue.

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One-Stage Bilateral Radical Neck Dissection

Indications and Technique

S. L. PERZIK, M.D., Beverly Hills

BLOCK DISSECTION of regional lymph node areas for metastases is a fundamental procedure in the management of cancer. In no area of the body is such an operation productive of more satisfactory results than in the neck. There are several reasons for this. First, almost invariably when patients die of cancer of the head and neck death is caused by the local effects of the disease rather than by distant metastases. Therefore, the more complete the local operation on head and neck, the better the end-results. Disease in this area is more amenable to early detection and appraisal. Although primary cancer in the mucosal surfaces of the head and neck frequently spreads to the regional cervical lymph nodes, the disease, nevertheless, will remain localized above the clavicle for months or even years. Hence there is a long, safe period of attack for eradication. Finally, and most important, a more complete removal of the regional node-bearing area "en masse" is possible in the neck than in any of the other node-bearing areas of the body. This is because the main lymphatic channels and lymph nodes accompany the major veins of the area involved.

If the nodes are involved with cancer, not infrequently the afferent and efferent channels are permeated with the disease and to a lesser or greater degree they are adherent to the associated vein. Many a surgeon, in attempting to save these vessels, has experienced the frustration of scraping or sharply dissecting these adherent nodes from the vein.

In the neck the internal jugular vein is relatively long and occupies the major pathway of the cervical lymphatics. Since this vein is excised from the level of the clavicle to well above the posterior belly of the digastric muscle in a radical neck dissection, and since the sternocleidomastoid muscle is also taken, it is possible to remove as a block of tissue practically all the lymph node-bearing area lying between the superficial fascia and the second layer of the deep cervical fascia. The first or enveloping layer of the deep fascia contains this mass of tissue and if the sternocleidomastoid muscle as well as the internal jugular vein is excised, this space need not

• Simultaneous bilateral radical neck dissection is an operation entailing acceptable risk if used in properly selected cases. The procedure is indicated for patients with bilateral cervical lymph node metastases so situated that a two-stage radical neck dissection could not be done without cutting through cancer tissue. Such patients are those with intraoral or cervical visceral midline primary lesions or those in whom, either by direct extension or lymph node involvement, the submental and submaxillary triangles are solidly permeated with cancer. The operation is indicated only for cure; for prophylaxis or palliation, lesser or staged procedures would be more productive of better results with less morbidity and mortality.

be entered except at the periphery of the dissection. In fact, during such a dissection the lymph nodes can frequently be palpated through the protecting layers of the surrounding fascia, but are usually never seen or individually exposed.

If a similar sacrifice of accompanying vein were possible in other node-bearing areas, such as the axillae, groins, iliac and aortic areas, the technical accomplishment of a "clean" and complete dissection in these regions could be attained. With the questionable exception of the axilla in some cases, this ideal situation has not been approached except in the neck.

A second fundamental principle in the surgical treatment of cancer is to avoid cutting through cancer tissue during its removal. In the past when both sides of the neck were involved with metastatic spread of cancer, a staged bilateral neck dissection was the accepted treatment, if cure were still possible. If the cancer in the neck intimately involved the anterior midline tissues (as is often the case), the surgeon carrying out this treatment either had to cut through cancer tissue in dividing the neck tissues for a staged bilateral neck dissection or limit the combined neck dissection on one side to a suprahyoid, supra-omohyoid or local excision of involved lymph nodes. He might even decide to do a bilateral suprahyoid neck dissection.

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All of those procedures are incomplete and dangerous, for they immediately jeopardize the patient's chances of ever receiving the benefit of a safe and complete block dissection of the neck, should there be recurrence. Such limited procedures in the neck terminate in the carotid triangle, and if lymphatic channels containing carcinoma are cut through at that point the recurrent growth will spread into the surgically opened field, through the destroyed protective fascial barriers, and become adherent to the carotid bulb and surrounding muscular floor of the neck. Such a recurrent situation is technically incurable by operation. Even if there is only a very small recurrent lesion adherent to the carotid bulb which can be removed by excising the bulb, the mortality rate associated with the operation is almost 60 per cent—and the chance of cure is less than it is with radical neck dissection which entails operative mortality of only 1 per cent.

To satisfy these fundamental principles of block dissection of a primary cancer and its immediate lymphatic drainage basin in certain midline lesions of the neck, it was necessary to extend the surgical management to include simultaneous bilateral radical neck dissection. Originally it was felt that the anatomical and physiological disruptions entailed in an operation of this magnitude were so great that it would almost certainly be fatal. No reports of an operation of this kind could be found in the medical literature. There were frequent references to simultaneous bilateral internal jugular vein ligation¹ and a few reports of excision of several centimeters of both internal jugular veins,^{2, 3} but such limited venous excisions and ligations are not comparable to the contemplated procedure.

The term radical or block dissection of the neck requires some definition. In this presentation it refers to the removal of all the venous and lymphatic systems between the superficial and third layer of the deep fascia of the anterior and posterior triangles of the neck, including the sternocleidomastoid and omohyoid muscles, as well as all or any part of the midline cervical viscera, if involved.

The feasibility of a staged bilateral radical neck dissection with an interval of one to three weeks has been adequately demonstrated.⁴ It was presumed, however, that the simultaneous excision of the internal, external and anterior jugular veins with the connecting collateral tributaries and the encompassed lymphatic system from the mandible down to the clavicle would be incompatible with survival. Therefore, the operation was not only never seriously considered but the thought of it was even frowned upon. The literature contains many refer-

ences^{5, 6, 7} to the impossibility of simultaneously cradicating so much of the cervical venous system, and despite current demonstration to the contrary, there are still frequent references to the hazard of removing both internal jugular veins in a two-stage block dissection of the neck. It can be well understood, therefore, why the consummation of this operation was so long delayed. The first successful result in simultaneous bilateral radical neck dissection was not attained until June, 1949.⁸

COLLATERAL CIRCULATION

Recovery after an operation of this scope is dependent primarily upon the potential capacity of the remaining venous channels to drain the cranial cavity and the dural sinuses. The vertebral veins of Batson⁹⁻¹³ form the safeguard of this collateral return. This system of veins passes as a plexiform network, primarily in a vertical direction, both intraspinally between the dura and vertebrae and extraspinaly between the vertebrae and the erector spinae group of muscles.

By way of the foramen magnum, this system communicates with the occipital and basilar sinuses which connect with the major intracranial dural sinuses. Numerous basal skull emissary veins empty into this system through collateral tributaries. At all vertebral levels these vertical veins anastomose transversely with each other and with the intercostal and lumbar veins which connect, either directly or by way of the azygos system, with the caval venous system. This vertebral azygos-caval route provides a detour of venous return from the brain and cranial cavity to the right side of the heart. Usually the vertebral system of veins is constantly functioning and, owing to absence of valves and low venous pressure, the blood may travel in either direction.

Under abnormal conditions of obstruction to the superior caval veins, the carrying capacity of the vertebral system increases, as has been clinically demonstrated. Since both anterior facial veins are also ligated in this operation, the intracranial return of venous blood from the cavernous sinus and ophthalmic vein is blocked. In addition, the pterygoid and pharyngeal plexus, the superior and middle thyroid veins, the transverse cervical veins and the common facial veins with their posterior facial and occipital anastomoses are cut off from drainage into the jugular system. After operation, therefore, the only superior caval veins assisting the vertebral system are the inferior thyroid, deep cervical and vertebral tributaries of the subclavian and innominate veins and the transverse scapular veins by way of the shoulder and posterior neck regions.

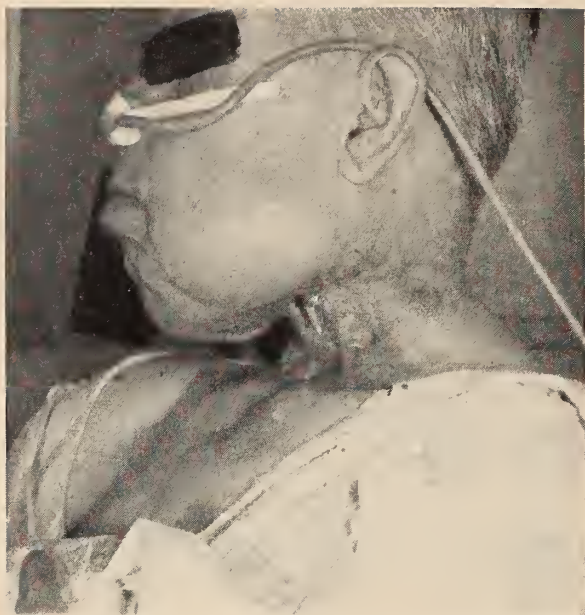


Figure 1.—Three months after operation. Pronounced lower jaw edema due to extensive removal of skin of neck with a midline visceral primary lesion and a simultaneous bilateral neck dissection.

MORTALITY

In the three cases in which the author has carried out simultaneous bilateral radical neck dissection, the patients survived the operation. Moore and Smith¹⁴ reported their first successful result in a similar procedure done in August 1950. In an addendum to that communication they stated that they had since performed simultaneous bilateral radical neck dissection 12 times with one surgical death due to aspiration pneumonia on the ninth postoperative day. Morfit¹⁵ likewise reported carrying out such an operation in December 1950 and the patient recovered.

COMPLICATIONS

The complications and sequelae are dependent on many associated factors such as previous operations, simultaneous removal of large portions of the arterial bed, excision of midline viscera with added destruction of the venous return, sacrifice of overlying skin, local changes caused by irradiation, and the general medical status of the patient. These factors cause a surprising variability in the postoperative changes. One patient may have fewer alterations than are usually seen after a unilateral block dissection of the neck, while another will have extreme edema of the lower jaw and face even after a year has elapsed (see Figures 1, 2 and 3). As a rule, with ligation of the second internal jugular vein, an immediate cyanotic edema appears about the face and particularly around the lower jaw. Within one to



Figure 2.—Six days after operation. Minimal edema after removal of primary cancer of floor of mouth, tongue, and mandible with a simultaneous bilateral neck dissection.

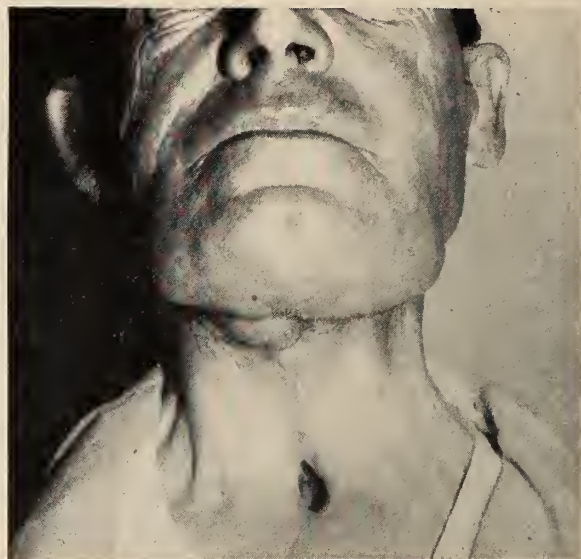


Figure 3.—Two months after operation. Minimal edema after excision of midline visceral primary cancer and simultaneous bilateral radical neck dissection. (Surgery, 31:297-306, 301, 1952.)

twenty-four hours the cyanosis may disappear. The edema begins to recede by the first postoperative day. There is a tendency, however, for the edema to be more pronounced and more persistent than that which commonly occurs following a two-stage procedure, but the difference is not too great or unacceptable. In cases in which a large amount of skin was sacrificed or midline viscera had to be removed, the cosmetic alterations were more pronounced. Some edema of the larynx occurred, as

was anticipated; tracheostomy was done routinely in all cases. No organic or functional alterations referable to the central nervous system were noted, nor were there visual disturbances.

Spinal fluid pressure was measured in one case. It more than doubled within 20 minutes after the second internal jugular vein was ligated. Ninety minutes later it returned to the preoperative level without the removal of any spinal fluid.¹⁶ The increase in spinal fluid pressure was associated with a moderate rise in blood pressure, acceleration of respiration and a drop in the pulse rate, all of which were back to within the preoperative range at the termination of the operation. In the other two cases, one patient had a sharp rise in blood pressure and a drop in the respiratory rate with return to preoperative levels in one hour, while the other had practically no demonstrable variation in blood pressure, respiration or pulse throughout the entire operation. No spinal fluid was withdrawn from any of them.

It was not necessary to infuse supplementary Pentothal[®] until one to two hours after the second ligation. Similar lapse of time before need for additional infusion of an intravenous anesthetic agent has been noted frequently in association with long operations on the head and neck.

INDICATIONS

Simultaneous bilateral radical neck dissection is now well enough established as a safe operation to warrant consideration of specific indications for its use. Because of the increased cosmetic deformity, the greater destruction of the arterial supply with associated impairment of healing, the increased necrosis and fistulae formation and the factor of added surgical shock particularly as regards patients as debilitated as most of them are, this operation is not recommended as a routine procedure where bilateral radical neck dissection is contemplated. It should be given first consideration, however, if the primary lesion is at the midline and there is clinically observable bilateral involvement of lymph nodes such as to necessitate transecting the primary cancer or a definitely cancer-involved lymphatic area in order to carry out a staged operation. Such primary lesions are usually in the lower lip, floor of the mouth, tongue, inferior gingiva, cervical esophagus, larynx or thyroid. (See Figures 4 and 5.) If the primary lesion is in the thyroid and is small and laterally placed, a two-stage procedure should be the treatment of choice. When the primary lesion is controlled but the initial metastases involve all the submental and both submaxillary triangles and, as is usually the case, also the mandible, the one-stage



Figure 4.—“In continuity” specimen includes larynx, hyoid bone, base of tongue, pre-epiglottic space, strap muscles, preoperative tracheostomy stoma and tissues of the bilateral radical neck dissection.

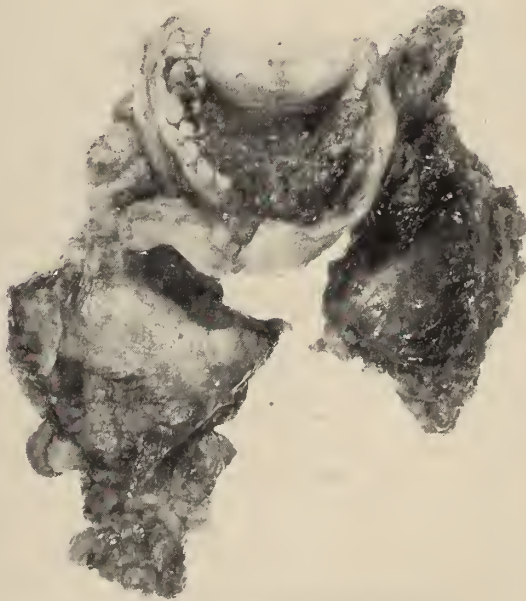


Figure 5.—Specimen of floor of mouth primary cancer with part of tongue and mandible and the tissues of the bilateral radical neck dissection.

procedure is better. Where an extensive primary cancer of the anterior floor of the mouth or tongue has invaded most of the inframandibular area and mandible, even in the absence of clinical evidence of lymph node involvement, the simultaneous procedure should be considered first. The use of the one-stage procedure is not warranted for elective (so-called prophylactic) bilateral neck dissection.

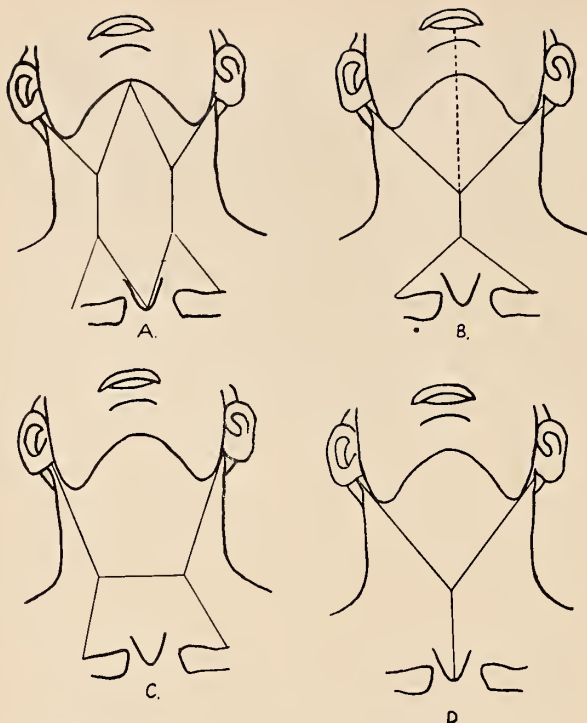


Figure 6.—Skin incisions for simultaneous bilateral radical neck dissection.

TECHNIQUE

The technique is no different from that utilized in routine combined primary excision and radical neck dissection except for the placement of the skin incision (see Figure 6). With intraoral lesions, a bilateral double "Y" skin incision could be used, leaving a wide attachment in the anterior vertical midline. The author has not used this incision, but it would seem that it might result in either limitation of the medial dissection of the neck or possible vascular impairment of the central skin flaps. Moreover, it could not be used in the presence of midline cervical lesions. A convenient incision is a double "Y" occupying both sides of the neck with the short vertical arm in the anterior midline. For intraoral primary lesions the upper triangular flap could be split in the midline through the entire thickness of the lower lip, and part of the lip removed if indicated. An "H" flap could probably be used, especially with thyroid, laryngeal or esophageal primary lesions. The author has used a single "Y" incision in operation for removal of a primary lesion of the larynx with satisfactory result.

In dealing with intraoral lesions, the dissections on both sides of the neck are done first and the excised tissues are left attached to the mandible without dissecting the submental or submaxillary triangles. The primary lesion is then excised with the mandible, cephalad and laterally, and removed "en masse" with the caudal attached neck tissues.

It probably is safer to dissect one side of the neck at a time and to tie the first internal jugular vein as early as possible, delaying the ligation of the second internal jugular vein in order to give several hours for development of the collateral venous return. Apparently there were no ill effects, however, when a team of surgeons worked simultaneously on opposite sides of the neck and the delay was not feasible.¹⁷ Exploration of the side of the neck most involved or concerning which there is most doubt should be carried out first, so that if it is inoperable that fact can be learned as soon as possible. In dealing with midline visceral primary lesions, with the possible exception of some thyroid cancers, each side of the neck should be freed toward the midline before the primary laryngeal, pharyngeal or esophageal lesion is excised. The operation is terminated with a tracheostomy, adequate drainage and a single layer closure. A well applied pressure dressing is necessary.

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Congenital Syphilis in California

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CONGENITAL SYPHILIS is preventable. By means now available physicians and other health workers can by coordinated effort prevent the occurrence of this disease in newborn infants. A study of 10,000 pregnancies at the Philadelphia General Hospital³ indicated that penicillin given in adequate amounts—2.4 million units and up, during pregnancy—to women with early acquired syphilis, reduced the risk of an unfavorable outcome to the same order of magnitude as in a normal non-syphilitic group of pregnant women. Without treatment, however, approximately 82 per cent of such pregnancies have an unfavorable outcome; 42 per cent of the infants are stillborn or die within the first few hours or days of life, 40 per cent are living infants with active syphilis, and only 18 per cent escape infection in utero and are normal. With treatment the expectancy relative to the delivery of a living normal full term or of a premature infant is equal to that of the control group, the incidence of stillbirths is 2 to 3 per cent, and the possibility of having a living syphilitic infant falls to approximately 1 per cent.

Two laws enacted in California in 1939 were designed to assist in the prevention of syphilis. One requires both partners in an intended wedding to be examined and to have a test for syphilis before the wedding. The object is to discover syphilis and to place an infected person under treatment before the infection can be communicated to an innocent partner. The other law requires a physician attending a pregnant woman to take a blood test for syphilis at the time of the first professional visit or within ten days thereafter. All laboratories that perform prenatal blood tests send a copy of the report to the State Department of Health and local health officers are in turn notified of positive reports in residents in the area of their jurisdiction. The earlier the diagnosis is made and treatment provided, the better the prognosis for both mother and child.

Congenital syphilis derives from the reservoir of syphilis in the adult population. During the calendar year 1950, the rate for all types of syphilis in California was 98.1 reported cases per 100,000 population. This is considerably less than the rate for the

• Routine serologic tests for syphilis (as required by California law governing prenatal examination) and penicillin therapy during pregnancy for infected mothers have been major factors in the prevention of congenital syphilis in California during the past ten years. In 1940 one of each 822 infants had the disease, as indicated by morbidity reports of congenital syphilis in infants under the age of one year. In 1950 the ratio was one in 8,148. To determine why congenital syphilis continues to occur, a study of the 134 cases reported over a two-year period was made with the cooperation of local health officers and practicing physicians. It showed that in 76 per cent of cases the mother did not consult a physician prior to delivery or reported so late in pregnancy that the infant was born before adequate penicillin therapy could be given. In another 15 per cent syphilis developed in the mother during pregnancy after a negative reaction to a prenatal serologic test. The other 9 per cent of cases were due to various factors, such as infectious relapse or reinfection in previously adequately treated mothers. The study indicated that most cases occur in the lower socioeconomic population groups. Seventy-four per cent of cases were in infants delivered in county hospitals.

United States as a whole, which was 155.1 per 100,000 population for the reporting year 1950.⁴

Chart 1 shows the reported cases of syphilis by stages for California for the years 1940 to 1951. The number of cases was declining prior to World War II, but this trend was reversed with military and industrial mobilization and there was a rapid increase of 35 per cent in the number of cases reported annually between 1940 and 1943. In the latter year 29,346 cases were reported, the record peak for California. The number of cases remained high during the war years and it was not until 1948 that the prewar downward trend was re-established. This observation may have some significance in relation to the current period of industrial and military mobilization. Although the trend at present continues downward, it shows a tendency to level off.

In 1950 and 1951, for each patient with primary or secondary syphilis reported in California, ten

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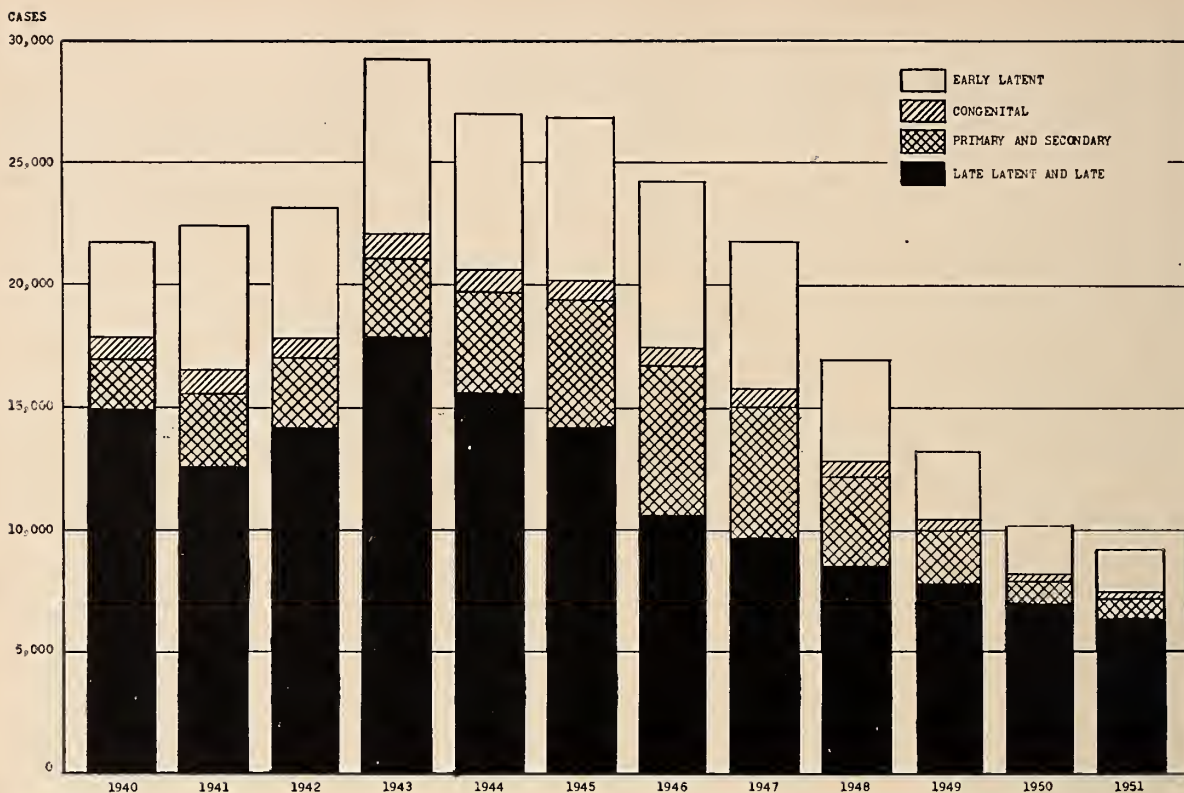


Chart 1.—Reported cases of syphilis in civilians in California, 1940-1951.

others were reported in the latent or late stage of the disease. This raises question as to how ultimate control of this disease will be achieved when 10 out of 11 cases pass through the most infectious stage before they are discovered.

Chart 2 gives data on the total number of reported cases of congenital syphilis and on congenital syphilis in infants less than a year old. In 1940, 905 cases were reported, 136 of them in infants under one year of age. In 1950 there were 377 cases reported, 30 in infants. During this period the number of births in California increased from 111,840 in 1940 to 244,457 in 1950. In 1940 one infant in each 822 born in California had a diagnosis of congenital syphilis; in 1950, one infant in each 8,148 (Table 1).

The cases of congenital syphilis that are diagnosed before the patient reaches the age of one year do not, unfortunately, represent the total problem. In 1940, for each case reported in an infant under one year of age there were 5.7 cases reported in persons over that age. In 1950, there were 11 times as many cases reported in persons over one year of age as there were in infants under that age. (See Chart 2.)

In light of the previously mentioned report³ that treatment of the mother during pregnancy with

TABLE 1.—Live Births and Reported Cases of Congenital Syphilis Under One Year of Age and Rate per 100,000 Live Births, California, 1938-1950

Year	Live Births	Reported Cases of Congenital Syphilis Under 1 Year of Age	Rate Per 100,000 Live Births
1938.....	101,844	163	160.0
1939.....	103,605	137	132.2
1940.....	112,287	135	120.2
1941.....	125,190	93	74.3
1942.....	154,567	74	47.9
1943.....	174,420	74	42.4
1944.....	179,123	114	63.6
1945.....	184,380	100	54.2
1946.....	218,484	128	58.6
1947.....	243,808	163	66.8
1948.....	239,518	105	43.8
1949.....	244,905	56	22.9
1950.....	244,457	30	12.3

penicillin is nearly 100 per cent effective in protecting the newborn infant from congenital syphilis, the new cases which appear must be attributed to failure in the fields of preventive medicine and public health. With this in mind, the authors began a study in 1949 of each reported case of congenital syphilis in a person under one year of age to determine if

CASES

1,000

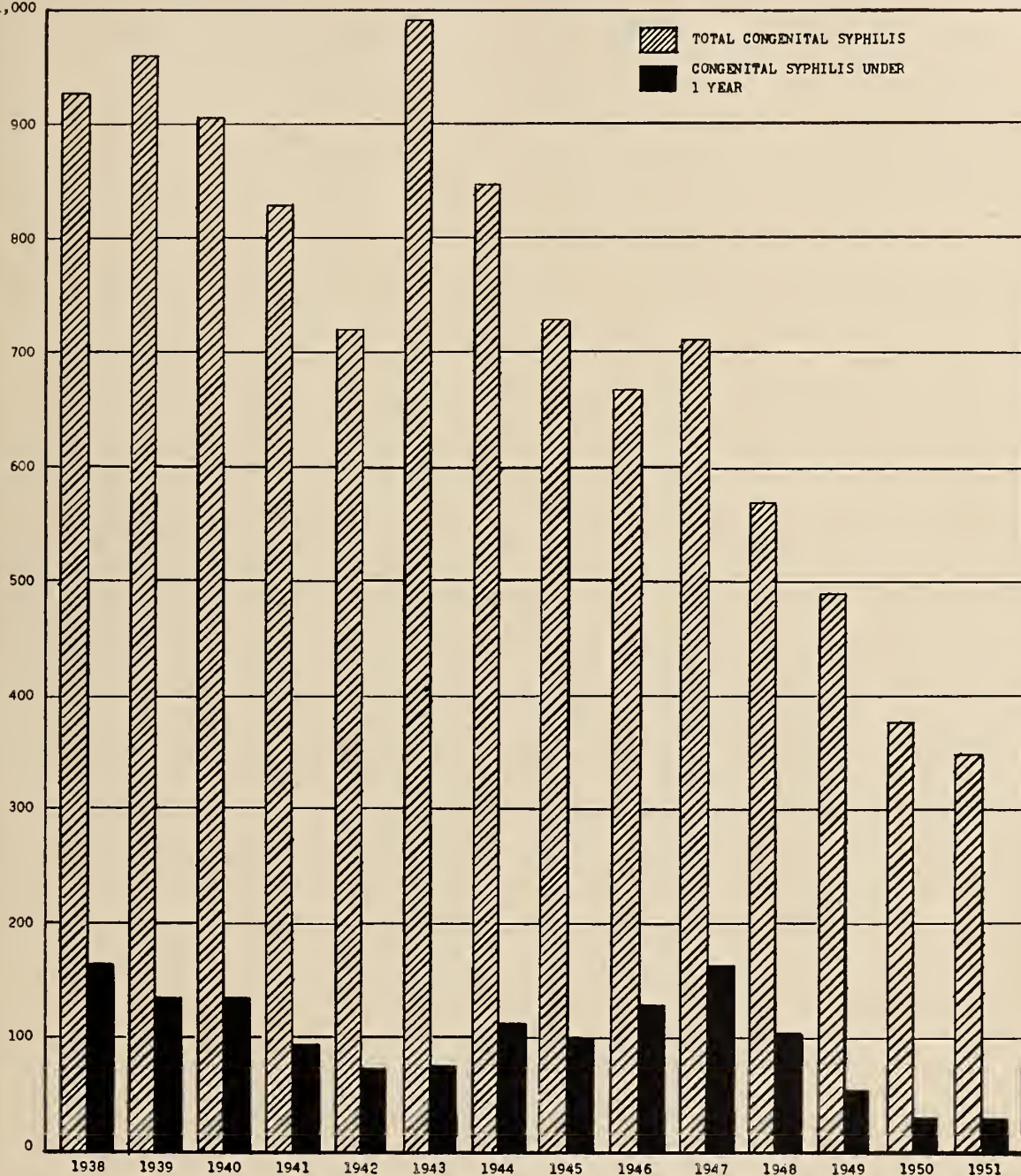


Chart 2.—Reported cases of congenital syphilis in California, 1938-1951.

possible how such tragedies could be averted. Over a period of two years data were collected on 134 infants.

Race and Sex: As regards racial origin, 34 per cent of reported cases occurred in Negroes and 41 per cent in persons in the Spanish-American population group. (Negroes constituted 5.6 per cent of the population of the state in 1950; the proportion

of Spanish-Americans is unknown, but obviously they are a minority group.) Fifty-two per cent of the infants were females and 48 per cent were males.

Marital Status of Mothers: In a similar series,² studied in Massachusetts, 11.2 per cent of the mothers of the infants were unmarried. It is estimated that 2 to 3 per cent of all the women delivered of babies in that state were unwed. While complete data

on marital status, was not obtained in the present series, the information that was obtained indicated that the proportion of unwed mothers was high.

Place of Birth: 98 per cent of the infants were delivered in a hospital. In California 98 per cent of all deliveries occur in hospitals. Seventy-four per cent of the hospital deliveries were in county hospitals and 24 per cent in private institutions.

Diagnosis: 23 (17 per cent) of the 134 infants reported as having congenital syphilis were later determined, by observation and serological tests, not to have the disease, and no treatment was given. (The morbidity report cards were sent in shortly after the birth of the infant, when a tentative diagnosis of congenital syphilis was under consideration, but before completion of the observation period necessary to substantiate or rule out the diagnosis. These cases should not have been reported.)

In 30 cases (22 per cent) the diagnosis was based on presumptive evidence, penicillin therapy was given on a prophylactic basis, and the presence of active syphilitic infection in the infant is open to question. The diagnosis of congenital syphilis is fraught with difficulty and, owing to the passive transfer of maternal reagin, it may be necessary to observe an infant with repeated quantitative blood tests for a period of three to six months following birth before a definitive diagnosis of active congenital syphilis can be established or ruled out. Dark-field examinations of the serum exudate from any skin or mucosal lesions and x-ray studies of the long bones may also be indicated. Since penicillin therapy is readily available, carries little therapeutic risk and is nearly 100 per cent efficacious, the attending physician may justifiably question whether the prolonged delay occasioned by a doubtful diagnosis serves the best interest of the patient. The information provided by this study indicates that some physicians are adopting the policy that where reasonable doubt exists, it is better to treat the infant with penicillin on a prophylactic basis than to await the findings of an extensive period of clinical observation and laboratory studies.

It thus appears that current statistics are weighted with reported cases in which penicillin was given to the infant as a precautionary measure for the prevention of congenital syphilis instead of for the purpose of curing a known active infection. If we are to have an accurate measurement of the occurrence of this disease, it is desirable that, in reporting, distinction be made between cases in which the presence of an active syphilitic infection in the infant has been clearly established by clinical and laboratory findings and those in which the diagnosis in the infant is based on epidemiological and presumptive

TABLE 2.—Live Births, Infant Deaths and Mortality Rate for Syphilis Under One Year of Age, California, 1938-1950

Year	Live Births	Syphilis Deaths Under 1 Year of Age	Rate Per 100,000 Live Births
1938.....	101,844	46	45.2
1939.....	103,605	41	39.6
1940.....	112,287	31	27.6
1941.....	125,190	26	20.8
1942.....	154,567	31	20.0
1943.....	174,420	27	15.5
1944.....	179,123	28	15.6
1945.....	184,380	28	15.2
1946.....	218,484	30	13.7
1947.....	243,808	22	9.0
1948.....	239,518	22	9.2
1949.....	244,905	9	3.7
1950.....	244,457	7	2.9

evidence. The former cases should be reported as *congenital syphilis* and the latter as *congenital syphilis—epidemiological*, the qualifying term indicating that penicillin therapy was given to the infant for prophylaxis because epidemiological data indicated probable exposure.

No case of congenital syphilis in this series resulted directly from a failure on the part of the physician to carry out a prenatal test. In a similar series² studied in Massachusetts, three such cases are recorded. An analysis of a sample of California birth certificates for 1951 reveals that out of approximately 1,600 deliveries in which no prenatal test was taken, the reason given by the attending physician in 64 cases was that it was overlooked. The provision of the California Health and Safety Code¹ with regard to prenatal tests is clear and concise: "Every licensed physician and surgeon or other person engaged in prenatal care of a pregnant woman, or attending such woman at the time of delivery, shall obtain or cause to be obtained a blood specimen of such woman at the time of the first professional visit or within 10 days thereafter."

If the 23 reported cases in which the infant was subsequently shown to not have congenital syphilis and the 30 cases in which treatment was given on a prophylactic basis in the absence of a definitive diagnosis are deducted from the series, 81 cases remain.

The principal factors resulting in the occurrence of congenital syphilis in these infants follow:

Failure to Obtain Prenatal Care: If the woman made one visit to a physician prior to delivery, it was considered for the purpose of this study that she had received prenatal care. Forty-two women (52 per cent) received no prenatal care, first coming under medical supervision when they entered the hospital for delivery. An additional 17 women (21 per cent) reported to a physician's office or clinic

only once, had a blood test which was positive for syphilis, then did not return and were not located until they reported for delivery. Of the 39 who received prenatal care (including the 17 who reported only once), 18 made their initial visit to a physician during the third trimester, 11 during the second trimester, and only ten during the first trimester.

In 12 cases (15 per cent) the mother had had a prenatal serological test that was negative for syphilis. When the mothers were examined later, after congenital syphilis was diagnosed in the infants, one had primary, two had secondary, and nine had asymptomatic seropositive early syphilis. In five of these cases a definite history of exposure to an infected marital partner during pregnancy was obtained. In the other seven it must be assumed that the mother was either incubating syphilis in the seronegative stage at the time the prenatal blood test was made or was infected after the test was made. A "false negative" report resulting from laboratory error on the initial test is also a possibility.

Inadequate Penicillin Therapy: In four cases the mother did not report for prenatal care until two weeks or less from the time of delivery and although the diagnosis of syphilis was established and treatment begun, delivery occurred before the course of treatment was completed.

Infectious relapse or reinfection occurred in two cases. One patient with a history of adequate therapy with penicillin, mapharsen and bismuth at the time of the birth of her first child was examined nine months later in the seventh month of her second pregnancy. She received five injections of mapharsen and three of bismuth before delivery and, when next examined in the clinic, four months after delivery, mother and baby had serological tests negative for syphilis. The mother had two more serological tests, both "negative," one two months later, and the other seven months later when she was in the fourth month of a third pregnancy. In view of the known adequate previous therapy, the negative results of serologic tests and the interim birth of a normal infant, it was decided that retreatment was not necessary. The patient did not return to the clinic for postpartum examination for nearly a year, at which time her third infant was eight months old. At this time the result of a Kahn test of the mother's blood was "positive" and the result of a Kolmer test was 33333. The result of a quantitative Kolmer test of blood from the infant showed titration at 2048 units with no end-point reached. The infant was mentally retarded, unable to sit up by himself, had prominent parietal bosses and other stigmata of congenital syphilis. This case of infectious relapse or reinfection is reported in some detail because it illustrates

the difficulties sometimes encountered in the management of syphilis in pregnancy.

In a second case, the history revealed that the mother had received 30 injections of an arsenical compound and 20 of bismuth in 1944 for secondary syphilis and 3 million units of penicillin when pregnant in 1948. Twelve months after the 1948 course of treatment she was delivered of her fourth infant which was found at the age of two months to have a serologic titer of 1024 Kolmer units and a darkfield-positive annular lesion on the face.

Biological "False Positive" Serological Tests: Two cases were reported on the basis of weakly positive or doubtful reactions in serological tests. One infant, ten months of age, had bronchopneumonia. The other, eight months of age, had a skin eruption. Both infants received penicillin but subsequent investigation did not bear out the diagnosis of syphilis. Results of repeated serological tests on both mothers were negative. The inconclusive serological reports on the infants were probably biological "false positive" reactions; the skin eruption a vaccinia with secondary infection resulting from a smallpox immunization.

Clerical Error: In one case a serological test report of "positive" was mislaid and the mother received no therapy before delivery.

Treatment Failure: There was one apparent failure of treatment—in a woman who received 4.5 million units of penicillin at the sixth month of pregnancy because of serological tests positive for syphilis. When the infant was four months old a skin eruption developed and there was a marked rise in titer in the quantitative serological tests.

SUMMARY OF OBSERVATIONS

In a series of 134 infants under one year of age reported to the State Department of Health as having congenital syphilis, 23 were found upon further observation not to have the disease, and 30 others had been given penicillin on a prophylactic basis before there was certainty of the diagnosis of syphilis.

In the remaining 81 cases, the principal factors resulting in the reported infection of the infant were:

	Number of Cases
No prenatal care.....	42
Mother visited physician only once before delivery.....	17
Infection (or incubation) in mother after initial negative prenatal test	12
Insufficient penicillin therapy before delivery.....	4
Infectious relapse or reinfection.....	2
Biological "false positive" serological tests.....	2
Clerical error (laboratory report mislaid).....	1
Treatment failure	1

RECOMMENDATIONS

Congenital syphilis can be prevented only if the pregnant woman receives prenatal care. In 77 per cent of the cases in the present series, infection occurred either because the mother did not obtain any medical supervision during the prenatal period or because the prenatal supervision she did obtain was too little and too late. Physicians and health workers should redouble their educational efforts to get women to seek medical care early in pregnancy. A prenatal serological test positive for syphilis should be considered a medical emergency and every reasonable effort made to ensure the patient's return to the clinic or physician's office for diagnostic study and treatment. Physicians should not hesitate to request the assistance of their local health department staff for this purpose. Health departments should ascertain whether women for whom "positive" prenatal test reports are received from the State Department of Public Health have remained under medical supervision. This service should be expedited and given a high priority.

Congenital syphilis occurs most frequently in the lower socioeconomic population groups (Negro, Spanish-American), among infants of unwed mothers and among infants delivered in county and municipal hospitals. At least two serologic tests for syphilis, one early and the other late in pregnancy, should be made on women in the above categories; on all women known to have been sexually pro-

miscuous; women having a history of any venereal disease; and single, divorced or separated pregnant women. The attending or resident physician admitting a patient in labor as a hospital service should have a serologic test done unless satisfied that one has already been done during this pregnancy.

To guard against the possibility of infectious relapse or reinfection, women adequately treated for syphilis before pregnancy and who are "seronegative" should have blood tests at least once in the first and second trimesters of pregnancy and monthly during the last trimester.

Women who have been adequately treated for syphilis but are still "seropositive" should be re-treated with penicillin during each succeeding pregnancy.

All patients infected with syphilis and the other venereal diseases should be questioned about contacts.

All cases of venereal disease should be reported by physicians.

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Delinquency in Women

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OBSERVATIONS IN THIS PAPER are based upon the psychiatric study over the past five years of approximately a thousand women in the state of California convicted of one or more felonious offenses. For the most part they were observed at the California Institution for Women, the only California state correctional institution receiving adult female offenders. The author is a part-time consulting psychiatrist there.

The institution has approximately 400 inmates ranging in age from the second decade to old age. All are convicted of felonies from petty theft with prior conviction through the gamut of human delinquent behavior, including forgery, grand theft, burglary, robbery, arson, and murder. Under California law the inmates are received on indeterminate sentences, varying with the offense, and the actual duration of term is fixed by an Institution Board following a period of institutional residence.

Consideration of this group is given in terms of etiological factors, patterns of offenses, the institution program and parole.

ETIOLOGICAL FACTORS

Etiological factors may be considered in five general categories: (1) Basic defects in early family relationship; (2) aberrant psychological states, including deviations sufficient in degree to indicate the diagnosis of actual mental illness, and including, as well, states of mental deficiency; (3) physical factors; (4) general environmental factors; (5) specific environmental factors.

The incidence of basic defects in early family relationships in the lives of the delinquent women studied was so high as to be considered almost universal for the group. General parental neglect and lack of supervision, parental delinquency, parental alcoholism, parental mental illness and parental incompatibility are deleterious factors frequently described, as are low parental cultural and sociological standards, parental oversolicitude, stern and aloof parental direction, and parental rejection.

These factors in the early lives of women delinquents often are present in very full degree. They, and other similar elements, often are particularly emphasized in the presence of parental divorce and the subsequent advent of a step-parent.

Read at the 107th annual meeting of the American Psychiatric Association, Cincinnati, May 11, 1951.

• From observation of some 1,000 women who were committed to a California correctional institution because of felonious offense it was concluded that:

1. *Delinquency results from certain identifiable factors, particularly basic defects in early family relationships, various aberrant psychological states including many forms of mental illness; physical illness or injuries, particularly those producing brain damage and resulting in abnormal psychological conditions; general environmental factors, and specific environmental factors.*

2. *Certain personality-types and certain life-environmental situations appear to be associated with certain patterns of offenses.*

3. *Correction and rehabilitation may be achieved to a greater degree as correctional institution treatment programs are increasingly implemented with psychiatric personnel, and as increased guidance and support are made available through parole divisions.*

An illuminating related quotation, from an "in-corrigible" adolescent: "My father, he actually isn't any good. I can't respect him. I suppose, of course, I like him, because he is my father, but as a person I don't like him at all. Mother's o.k., but she isn't very affectionate. Even if I hadn't seen her for two years, I could walk in and it would just be, 'Oh, hello, there.' They never keep their promises. Yet I can't ever be mad at them. I keep going back for more. I can reason things out with anything but my family."

The parents of whom she spoke are divorced. Her husband is in San Quentin prison. She is 19, intelligent, pretty, and she had become addicted to heroin and had participated in burglary.

Aberrant psychological states likewise are often present in delinquent women. They were of variable degree and were clearly related to the commission of the delinquent act, sometimes specifically, and in some cases generally in that they had contributed to the formation of a total life situation which caused seriously delinquent behavior to become inevitable.

Mental deficiency is not common, but where it is present the concomitant factors are easy suggestibility, lack of judgment, feelings of rejection and

the need to win acceptance—factors which lead directly to delinquency through the influence of delinquent companions.

Psychotic states occur rather rarely, but when present are often considered, as might be expected, to be intimately connected with the commission of the offense. Psychoneurosis is common. Post-traumatic and postencephalitic personality disorders constitute a continuing problem. Sexual deviations and the symptom complex that has been designated by the term "personality disorder" likewise are of high incidence.

Most of the women who do not have any of these more or less specific conditions have various combinations of personality defects which, while not single diagnostic entities, often motivate behavior in the direction of the social failure of delinquency. Among such defects are dependence, general inadequacy, immaturity, intermittently repressed resentment, antisocial aggressiveness and easy loss of adequate emotional control.

Alcoholism and narcotic addiction, arising earlier as corollaries of these states of maladjustment, may contribute additional pressure toward delinquency, while a toxic substance, usually alcohol, frequently is of immediate influence in the commission of felonious offense.

Physical factors alone, other than the physical illness producing brain damage or occurring in conjunction with addiction, are not high-ranking etiological determinants. Occasionally, chronic illness may contribute to the creation of special need with an effort to seek a solution through (usually) a non-violent offense such as burglary or forgery. More important are the long-time reactions of persons ostensibly handicapped by the presence of physical abnormalities like obesity, scars, tallness or shortness, a large nose, or big ears.

General environmental factors are of considerable importance. While endogenous factors appear to make the primary contribution to delinquent behavior, exogenous environmental factors certainly in many instances provide the example or supply the incentive without which many delinquent acts would not occur.

An environment of associates whose influence is directly toward delinquency is important in causing a woman who otherwise might not do so to commit a delinquent act. The associate may be a casual neighborhood acquaintance, a lover, a homosexual friend or a husband inclined to delinquency. But, most importantly, there often must be, in addition, a general lack of reasonable environmental security, and particularly the absence of any person accepted by the potential offender as offering warm confidence and counsel. Financial stress, loss of work, lack of occupation, gambling, alcoholism and nar-

cotic addiction all may direct the offender toward delinquency-tainted environments.

Environmental dislocation through migration to a place where the social order is more complicated may be a factor causing delinquency in susceptible women. The change is particularly distressing to persons under the handicap of inadequate vocational training, which in itself may be an important factor in the development of delinquency.

Finally, specific environmental factors—often it almost seems by action of a perverse fate—may give the final impetus to push into delinquency a woman ready for transgression. Such factors are of every type and variety, animate and inanimate. The presence of a knife or a gun or other lethal weapon lying at hand as the potential offender experiences a catastrophic episode of rage or fright may almost create the crime of murder or manslaughter. "Opportunity" in the way of inadequately protected funds or the key in an unguarded automobile may tempt beyond weak resistance. Or the specific environmental factor leading to crime may be the need of a beloved person, or anger at rejection or a feeling of hopeless inferiority arising from perhaps a trifling rebuff.

PATTERNS OF OFFENSES

Although each woman offender must be regarded as having particular elements of difference from all others, there are in general certain personality types and certain life-environmental situations which seem to be associated with certain patterns of offenses. The following typical examples are composed from numerous histories.

1. One pattern is that of an adolescent girl, usually of relatively low intellectual endowment and with feelings of rejection by her parents, in a rural environment. Unmarried, she becomes pregnant, leaves home for a more urban area, finds difficulty in self-support, then drifts into, successively, prostitution, narcotic addiction, and forgery, all over a period of years. The degree of intelligence, the degree of addiction, and the duration of delinquency are important in the outlook for freedom from delinquency following institutional training experience, but the prognosis generally is dubious.

2. Another adolescent girl, likewise from a rural environment, of good intellectual endowment, strong physically, encounters long-time stress in relationship to her parents, is rebellious, resentful, and non-conforming, and leaves home to encounter chance-met delinquent male companions with whom she participates in delinquent acts of violence, such as robbery. The prognosis may be favorable.

3. A middle-aged woman, married, divorced or widowed, who usually has served in some capacity on the fringes of medical practice during the earlier

part of her life, such as partial completion of nurses' training, work as a practical nurse in sanitarium, or graduation from office receptionist to a physician's assistant, then has chance encounter with the practice of abortion, and later proceeds to the operation of her own abortion practice. Her intellect level varies. The prognosis is very uncertain, and repeated practice of abortion the usual act in violation of parole.

4. The alcoholic check-writer, of the earlier or middle decades of life, whose variety is legion, whose early parental relationships may be marked by oversolicitude, and whose check-writing activity may initially be influenced by other delinquent persons. Backgrounds and personalities of persons in this group are considerably diverse, but characteristics are irresponsibility, lack of insight and easy optimism. The prognosis varies.

5. A middle-aged Negro of dull-to-average intellectual endowment, who has usually served in a humble occupational capacity and has lived under modest economic circumstances, who stabs or shoots her lover, or husband, or feminine rival in a quarrel in which alcohol plays a part, and who usually pleads guilty to manslaughter. The prognosis may be excellent or poor.

6. A youthful bookkeeper and secretary, of good intelligence, who has experienced a variety of stresses in her early family relationships, who possibly is considerably ambivalent toward the mother, who encounters temptation and opportunity through an employer whose methods of accounting may be inadequate or in some other similar fashion, and who then commits grand theft, often of large sums. Pressures involving gambling, relationship to men, or even of general family need, may be involved. The prognosis is uncertain to favorable.

7. An adolescent girl or youthful woman who reacts in terror to childbirth in an illegitimate pregnancy, and who soon thereafter kills the infant. Adequate parental support usually is lacking. The prognosis in the absence of major mental deficiency usually is favorable.

8. The young woman of average intelligence who, after early years of uncertainty and stress, acknowledges the presence of homosexual orientation, with perhaps the development of a homosexual relationship, and who, in a state of chaotic emotionality embarks upon repeated acts of delinquency, as forgery. The prognosis is poor for any early change.

9. A woman, youthful to middle-aged, who gives a history of prior severe head trauma or of encephalitis, together with long-time subsequent symptoms of impulsiveness, poor control, and repeated delinquent acts, often of a relatively minor type, but occa-

sionally of the greatest violence. The prognosis is poor.

10. A woman of youth, middle, or old age, whose offense is premeditated murder. The evaluation of these women does not lend itself to generality. Long-time and major stress usually is involved. The prognosis is favorable more often than not.

THE INSTITUTIONAL PROGRAM

The great majority of these offenders, and of others guilty of numerous additional offenses, whether those offenses be petty theft or murder in the first degree, are destined for ultimate release, and it is particularly for these women that the rehabilitative measures in institutional life should be planned and coordinated, from the very hour of initial admission.

The initial induction experience, with group meetings designed to acquaint the women with the general organization and purpose of the new environment, together with extensive personal studies, in itself constitutes a therapeutic measure of considerable import, with a strong influence toward personal reorientation and the directing of future activities toward achievement. Women offenders, like many others in the general population, often have no conception of the correctional institution as a rehabilitation center, and their anxiety, depression and personal disorganization are likely to be severest at the time of admission, owing to the trauma of the offense itself, the time in jail, the trial and the final sentence. The relief which comes with the realization of the treatment program is often followed by new hope and by at least an initial determination to succeed.

Through the group of personal studies, including sociological, vocational, religious, physical, psychological testing, and psychiatric, the woman as a functioning person can be evaluated and the apparent etiological factors in her delinquency recognized to some degree. Thereafter, ideally there is created an individualized program for each inmate, including the correction of remediable physical defects, formal education, vocational training, participation in inmate group activities and psychiatric treatment to the degree in which it is available.

It is obvious that psychiatric diagnosis and treatment can be of immense benefit to the inmate group, and that this phase of the treatment program profitably can be utilized to the degree seen in the best of private practice—a degree which is not remotely approached in many correctional institutions. Recognition of this need for psychiatric treatment, which has come with the increasing public acceptance of the value of psychiatry, is acknowledged every day by courts, judges, probation officers and

participating attorneys, even to the point that delinquent individuals sometimes are admitted to correctional institutions upon the major premise by the committing judge that only in this way will they be placed in a situation where adequate psychiatric aid will be available to them.

This admirable theoretical concept may, however, and often does far exceed the correctional institution's ability to fulfill, in view of the limited available psychiatric services.

The attitude and interest of the psychiatric department, or of the individual psychiatrist, is of first importance. Rejection of the "bug doctor" or of the "psych" will always be shown at first by some inmates, but if the emphasis is upon a permissive and friendly early relationship, without reference to the inmate as a "criminal," but instead with consideration of her assets and liabilities as a functioning human being who has failed in one phase of her social relationships, then it will be found that the inmate group not only will be receptive to the suggestion of psychiatric treatment but often voluntarily will seek it.

There is the additional observation that the total institutional program of living, properly oriented and directed, in itself becomes a therapeutic experience. The correctional officers in charge of particular groups of inmates in residence situations, the vocational instructors, the class-room teachers and all other institutional personnel, to degrees depending upon their personal characteristics and the closeness of contact with the inmate groups, become members of a therapeutic team, under the direction of the superintendent, whose philosophy, personal characteristics and total qualifications may considerably determine the therapeutic atmosphere of the entire institution.

The therapeutic influence of these various persons does not stem from direct counselling contracts (al-

though counselling is often an integral part of the particular activity, directly or indirectly) but more strongly from personal examples, through personal attitudes, beliefs, and virtues.

PAROLE

Parole, the period toward which the training program is presumably oriented from its inception, represents a time of trial in which more succeed than fail. The probability of parole success or failure is often predictable on the basis of the assets and liabilities of the person involved, as evaluated at the conclusion of her institutional stay. Sometimes the evaluation of a candidate for parole would seem to indicate almost certain failure. Yet the parole may be granted upon consideration of the degree of the offense, the limits of the imposed term or the very fact that the judgment of those concerned is not infallible.

Parole failure usually occurs through stress of forces similar to those which brought about the initial delinquency, although the specific offense may differ. Or violation of parole may come about through a variety of relatively minor acts of non-compliance. The amount and type of support given a parolee is vital in parole success—support such as can be given by interested relatives, by adequate financial resources or by satisfactory vocational placement.

Limitations of the parole staff often are extreme, by reason of budgetary considerations, in the face of a task which demands much.

Extensive parole activity of a psychiatric social-work type during the early months of parole could presumably avert parole failure in many cases in which the parolee is not quite adequate to making the transition from a regulated institutional life to an unregulated outside existence. The attitude of the community toward previously delinquent women often is inimical to success of parole.

1200 North State Street.

The Auxiliary Treatment of Psychotic Women

Group Therapy for Their Husbands

GENE GORDON, M.D., and KARL M. BOWMAN, M.D., San Francisco

WHEN A MARRIED WOMAN experiences a psychotic break and has to be hospitalized, it creates serious problems for her husband. Besides carrying on his job, he is saddled with the children and the household. He must get some woman of the family to help or a housekeeper, but still it involves extra work for him. These additional burdens fall on him when he is so anxious about his wife that it would be hard for him to carry on even his usual work.

The wives in the hospital are not thereby removed from family concern, and visits from a tired anxious husband do not make them feel any better. They feel guilty enough about abandoning their families; and although the men usually make a valiant effort to conceal their own anxiety, no one is fooled and the hospitalized wife feels even more guilty. When the wife is discharged and comes home, the husband's anxiety comes to bear on her even more heavily.

The husbands manifest their anxiety in many ways. Some come directly to the wife's therapist and ask for psychiatric help. Others turn the brief conferences which relatives are accustomed to have with the patient's doctor into therapeutic hours for themselves. They do this rather subtly. First they ask how the wife is getting along, when she will be home, and so on. Gradually this turns into questions about how decisions they themselves have to make will affect their wives. "If I take a business trip to Oregon, will she be upset?" "She's coming home this weekend and her sister wants to drop in; do you think that's all right?" Such men may take up an hour or two a week of a busy therapist's time without realizing that they are really asking for help with their own emotional problems. When this is pointed out to them, they may accept the interpretation with alacrity, as if they knew they were asking for psychiatric help, but did not dare to come out openly. Equally common is a persistent denial by the husband that his problems are anything other than those created by his wife's illness.

At the Langley Porter Clinic husbands of inpatient women who were willing, were usually referred to the outpatient clinic for individual psycho-

• Group therapy for the husbands of hospitalized psychotic women relieved the anxiety and feeling of guilt of the husbands and led to better communication between husband and wife. It was particularly helpful just before and after the wife came home from the hospital. The group meetings saved various members of the hospital staff considerable time which they otherwise would have had to devote to the husbands individually.

therapy. Facilities are limited, and frequently they had to wait many months before a therapist could be found. That was the situation in May 1951, when the group-therapy project herein reported upon was undertaken. One of the authors was resident psychiatrist on a ward for female inpatients, and found himself spending increasing amounts of time with the husbands of his patients. At least four of these men were on the waiting list for outpatient treatment. The therapist himself had no time for formal or informal therapy with these men. Furthermore he was reluctant to treat both husbands and wives on an individual basis simultaneously. Yet there was a clear need, and failure to satisfy it was obviously interfering with the therapist's primary objective, the treatment of his inpatients.

These were the considerations that led to the group-therapy project with the husbands. The group method has been used in child psychiatry with parents of disturbed children. At the Langley Porter Clinic, the parents of psychotic adolescents have also been treated in groups. A review of the literature disclosed no published work on group therapy with the husbands of hospitalized women.

The group started with seven members in June 1951. It was planned as an "open" group; that is, members could be added as circumstances permitted up to a maximum of eight at any one time. The group meets once a week for an hour and a half in the evenings in a small conference room at the clinic. At the time of this report the meetings had continued regularly for nearly 11 months. A total of 12 men had been in the group at one time or another; of the original seven, five still were attending.

From the Langley Porter Clinic.

Presented before the Section on Psychiatry and Neurology at the 81st Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1952.

No attempt was made to select the husband on the basis of the diagnosis of the wife's illness. As it happened, eight of the 12 wives were diagnosed as schizophrenic; the other four were primarily depressed. Only one woman did not have electric shock therapy and/or insulin therapy in addition to psychotherapy. The group leader was also therapist for five of the wives. Each wife was actually in the hospital when her husband joined the group; all the wives were discharged from the hospital and went home in the course of the meetings.

The therapist saw each man individually before he joined the group to get some background information, and to eliminate those for whom group therapy did not seem indicated. Only two men who were interviewed did not join the group. One was invited but did not attend. Another, manifestly schizophrenic, was referred for individual therapy.

Most of the men were in their early thirties; three were about forty years of age. As to occupation, there were three engineers, three salesmen, a chemist, a postman, a plumber, an accountant, a bartender, and a regular army officer. It was substantially a middle-class group. With one exception, all the men had children; in one case the child was adopted. Five of the men could be loosely characterized as passive-dependent personalities, mildly psychoneurotic. Four had more severe neuroses, and three might be considered schizoid personalities. Three men had had some psychotherapy previously. One was hospitalized for a year and a half with combat fatigue; one man had had a year of analysis; a third had been in therapy with a clinic social worker for several months.

The central theme of the group, one which was repeated in many guises, was an overwhelming, immobilizing guilt. Each man was saying in one way or another: "I feel responsible for my wife's breakdown. I don't know exactly what I did, so I'm scared I may go on doing it. Then she'll stay sick, or if she does recover, she'll have a relapse." The overt expression of this underlying guilt-theme varied from man to man. Some were fairly direct: They had been too selfish in their hobbies, or delinquent in showing affection to their wives. In the first meeting many men said how hard it is to tell their wives they like a new dress or enjoy a meal. But this directly expressed guilt had a spurious quality to it, like the confessions that men make to please an inquisitor.

A more significant manifestation of their guilt was the overprotection the men displayed toward their wives. They tended to project their own anxieties; for example, they were afraid that other people's opinions about mental illness might upset their wives. Some avoided social contacts lest someone make an untoward remark about insanity. Some men

did all the shopping so that the wives would not be subjected to critical scrutiny in the shops. The men tried to reassure each other that mental illness is just like appendicitis, that attitudes of condemnation are archaic, and that it is surprising how many people turn out to have crazy relatives. They agreed that people today are really quite understanding about mental illness.

Yet many of the men had gone to some length to conceal their wives' condition. One man told people his wife was travelling. Another said his wife was hospitalized with a back injury. Generally the group condemned these subterfuges and reassured those who had used them; but it was not until much later that the group returned to this subject and faced the fact that the fears they attributed to their wives were their own fears, and the misconceptions they ascribed to the public were their own misconceptions.

HUSBAND-WIFE COMMUNICATION

The tendency to overprotect showed itself in other ways. Many of the men continued to do extraordinary amounts of housework after their wives came home. One man routinely cooked breakfast for himself and three children, and then on his return from work cooked dinner for the entire family, bathed the children, and put them to bed. He did all this without question—that is, he did not ask his wife in words to resume her share of the household chores.

This lack of communication between husband and wife was a universal problem. Not only did the men find it hard to express any feeling toward their wives, other than mild irritation, but it was hard even to converse. At one point the group was enumerating various activities that husband and wife might do together to keep life interesting. After they had talked of sports, bridge, dancing and so on, one man said, ". . . but why do we always have to be doing something; why can't we just sit and talk?" Another man said, "It seems to be a failure of meeting of the male and female minds." That was as far as they went at the time, but four months later the group returned to the same topic at a somewhat more sophisticated level. They talked of their reluctance to confide their "secret thoughts," their fantasies and daydreams to their wives, or anyone else for that matter. They elaborated on their fear of ridicule, that they might be thought crazy. One man recognized a temptation to act on his fantasies, and was afraid his wife might perceive this temptation.

Communication between husband and wife was one thing that improved considerably during the project. The men felt encouraged to discuss some of these problems with their wives; it was not unusual for the men to go home from the meeting and

report the proceedings—and the wives were invariably curious. In this way they often were able to ventilate some gripes they might have been harboring for years. Both husbands and wives were pleased with the new freedom of speech, and the opinion was frequently repeated that “if we had only talked things over together like this before she got sick, she might never have had a breakdown.”

One of the chief resistances to better insight was created by the very nature of this particular group, namely that the men's wives were psychotic. This was the inescapable reality, and understandably anxiety-provoking. It was hard for the men to see that this very real concern and anxiety was complicated and exaggerated by emotional disturbances within themselves. The therapist emphasized that there was little the group could do to help the wives directly; they were getting their own therapy. The men could make their best contribution by diminishing their own anxiety through the fullest expression and understanding of their own feelings.

Nevertheless there persisted a tendency to discuss the wife. This tendency was reinforced by the forceful, rigid personality of the army officer. From the beginning he took a firm stand that there was no problem in his marriage except that created by his wife's illness, that his own feelings and anxieties were irrelevant. Prior to his wife's illness theirs had been the perfect marriage, and all he wanted was a return to that normality.

The struggle between this man and the therapist for leadership of the group was nicely symbolized by some by-play that came about relative to the seating arrangements. The conference room contained a long rectangular table, at one end of which sat a large desk placed at right angle to the table. The seat behind the desk seemed too removed from the group, so at the first meeting the group leader sat at the free end of the table, close to the group, yet detached from it. When the therapist arrived for the third meeting, he found the officer in the seat behind the desk, manifestly the position of authority. The officer looked uneasy and explained that the armchair there was more comfortable. From this vantage point he further developed the role he had begun, that of chief interlocutor.

Characteristically he would begin the meeting by turning to another man: “Well, how's your wife getting along?” In this fashion he protected himself doubly. First he focused the discussion on the wives rather than on the men themselves. Secondly by encouraging others to talk he avoided talking about himself. When several attempts to interpret these defenses had failed utterly to alter the pattern, the therapist finally resorted to musical chairs. He arrived early and took the seat behind the desk. When the officer came, the group tittered and he wryly

observed that the therapist had “stolen” his seat. He promptly took the seat at the free end of the table which the therapist had vacated, and continued to play his defensive role. The movement of the group toward more personal topics made his position less tenable; he gradually ceased directing the discussion toward the wives, and finally symbolized this change by sitting at the side of the table.

THE GROUP LEADER'S ROLE

The group-leader planned to remain as far as possible an observer and interpreter, but in the very first meeting this role was attacked by the group; and throughout there was a persistent effort to draw the leader into the discussion, to get corroboration and support. The therapist did try to answer questions of fact, about technical procedures or administrative rules. What happens in electric shock therapy; does it do any permanent damage? How long does the memory-loss last? Why do they treat some people with electric shock therapy and others with insulin? Do all patients go to Occupational Therapy? While the therapist replied directly to questions like these, at the same time he tried to get at the anxiety behind the question. The pronoun “they” was prominent: “Do they relapse? Do they recover their memories?”—and the therapist emphasized that though certain generalizations were possible, individual differences were usually of decisive importance.

Questions about psychotherapy were handled more carefully. The men were intensely curious as to what the wife said to her doctor. They sensed in their wives a considerable hostility toward themselves, and were jealous of her therapist. They made jokes about how she tells such and such to her doctor, but “she's damned if she'll tell me.” There was some feeling, particularly in the early meetings, that the group leader, the clinic, and the wife's therapist were all in league against the husband, blaming him for her illness. These jealousies and resentments were never expressed directly, and attempts to bring them out in the open failed; but they seemed to diminish with time.

Questions about psychotherapy sometimes had another significance. One man asked whether psychotherapy could become a “crutch”; a friend, a social worker, warned him that often the patient became dependent on her psychiatrist for years, and he certainly did not want this to happen to his wife. After some discussion, another member wondered if the questioner was really talking about himself; maybe *he* was afraid of becoming too dependent on the group. The first man became quite tense and indignant; asked whether the therapist thought he was becoming too dependent on the group. Whether this was so or not, the therapist observed that he surely

was *afraid* of becoming too dependent. Although the leader tried to direct the discussion towards fear of dependence and its meaning, the problem was not worked through at the time. At the end of the meeting another member jokingly said to the anxious one: "I guess we won't see you next week; you'll have to prove that you can do without the group." In point of fact neither of these men showed up for the following session; and the man who was so upset stayed away three weeks. When he did return he was armed with some convincing excuses, and assured the group with chagrin that he had not tried to prove anything by his absence.

This fear of dependence was manifest in other ways. The men equated dependence with passivity, and vigorously resisted any hint of their passivity. On one occasion a man brought up his in-laws; described his father-in-law as a Caspar Milquetoast who is pushed around by his mother-in-law, a tough domineering woman. A second man, surprised, said, "Gee, you've just described my in-laws to a T." Several others agreed. They all said that such a relationship was anathema; they would choose divorce to being pushed around like that by their wives.

Divorce came up often but, interestingly, the men did not usually give it much consideration as a possible solution to their difficulties. It would be easy to consider this as evidence of guilt, but the therapist did not get the impression that such was the fact. Surely they were apprehensive about the social, financial, and personal consequences of divorce, but more important than these drawbacks seemed to be a fundamental need for their wives which led most of the men to want to work out their marriages positively, whatever the difficulties.

There was some serious talk about marriage as an institution. What should one expect from a husband or a wife in marriage? What is marriage for, why do people marry? Some men accepted unquestioningly the cultural stereotype of the happy marriage, and had tried to live up to it. With discussion they came to feel that this was unattainable and unrealistic, in part because it was a product of a bygone age. In the group they worked out their own somewhat more realistic ideal, although they recognized that certain exigencies might force them to compromise even with this.

Women, they agreed, should not be expected to do all the housework. Women work all day too, and a man should be willing to help with the evening chores until they are finished. The group agreed that there was nothing wrong with a woman's holding an outside job, if it would make her happy and contribute to the smooth running of the household.

Some were not convinced and felt that woman's place is ideally in the home, unless it makes her "nervous."

In these discussions about who should do what, it became clear that breakfast has special significance for these men. Who should make breakfast had been a point of contention in many homes; in any marriage older than two years the point had been resolved and the husbands made their own breakfasts. On the rare occasions when a wife would prepare breakfast, the man interpreted it as a sign of favor, a gold star for good behavior. One man related the size of his breakfast to the satisfaction his wife had derived from sexual relations the night before, and this became a standing joke in the group.

Sexual topics were never explored very deeply, although the men agreed that sex was "important" to them and to marriage. Many of the wives, once they had become ill, said they had long been dissatisfied with their sexual experiences; and this came as a shock to their husbands. "I thought she enjoyed it as much as I did," one said. "After so many years, to find out she didn't—I can't really believe it. Maybe she just thinks so now." They never doubted their own sexuality; they spoke of how much they missed sexual relationships with their wives away, and it was tacitly assumed that each man was an adequate lover and that any sexual problems originated with their wives.

The chemist, in contrast to the others, stoutly maintained that sex was relatively unimportant since it was all in the mind, unlike hunger and thirst which were real physiological urges. This stand made the others quite angry. In general the chemist was inclined to rationalize, to express an unrelenting optimism which amounted to an outright denial of the very real problems that obviously beset him. Although the group was at first disconcerted by this Pollyanna, it gradually became clear that he was experiencing real difficulties and the group was reassured that one could not merely wish them away. The chemist was very irregular in his attendance and ultimately dropped out.

The husbands denied any interest in using other women to relieve these frustrations. No overt extramarital relationships were reported; on the contrary the men avowed great fidelity, although they generally admitted they were not unresponsive to the sight of a pretty girl. In this connection two men denounced their sisters-in-law for being irresponsible and wild. The group was a little puzzled as to why these women were "problems" for the men who talked about them so much; but not one brought up the possible temptations involved. Fidelity seemed to be a matter of contract rather than morality: "I would not like to see my wife unfaithful, so I shall

not be." The group was vehement about the wife's possible infidelity; they would throw her out. One man who disagreed was dismissed as a curiosity.

Subjects such as impotence, homosexuality, masturbation and perversion were never brought up; although in the preliminary interviews these topics had worried some members. All the men said their education in sexual matters during childhood had been painfully inadequate, but implied that this deficiency had been completely remedied. When the therapist questioned this assumption and suggested that perhaps they still had some questions, it did indeed provoke a lively discussion of contraception and other sexual topics.

Freedom of discussion was an issue throughout the meetings. At the end of the first session the group expressed a desire to structure the discussion by confining it to one man or one common problem at each meeting. Once, after a number of meetings had been held, the therapist called the group's attention to this pattern: three or four men would come a few minutes early and begin spontaneously to talk about sports, the weather, or a newspaper scandal. When the therapist arrived to start the meeting, they would lapse into silence, assume grim expressions and "begin" the meeting. They became indignant at this confrontation: "Well, what were they supposed to talk about, baseball?" When the therapist reminded them of their freedom to talk about anything at all, they said, "Yes, but we are here to talk about our problems with our wives and of course our own emotional problems; baseball would be a waste of time." Efforts to point out that whatever they talked about they were still expressing themselves were unavailing. There was a kind of masochistic determination to confess, no matter how painful. In the next session, a couple of men did begin to talk about their work, and thence developed a political debate; but everyone was uncomfortable about wandering from "problems."

After four months of meetings, a dramatic event occurred that threatened to disrupt the group: One of the members killed himself. He was a new member who had attended only two meetings. Neither in the preliminary interview nor in the meetings he attended did he give any indication of undue morbidity. At the first meeting he listened carefully; made a few rather pertinent comments. The next time he dominated the meeting; that is, his story occupied the principal part of the discussion. This was the usual pattern of behavior for new members, and his story was familiar. He shot himself through the head three days later, leaving a long note in which he said that he had intended visiting his wife the following day to kill her, but could not wait.

Two weeks later one of the members learned the story from the man's mother-in-law and told the

group. The men were stunned at first and plied the informant with questions about the circumstances. They seemed anxious to identify him as a queer character, and to support this thesis they made much of the fact that he had lived in painful frugality although he had saved several thousand dollars. Then they began to feel sorry for his wife; she must have been set 'way back, they thought. But the man who knew the facts said: "Well, I saw her yesterday, and as a matter of fact I've never seen her looking better. My wife is on the same ward and says she is much better." (Indeed she improved rapidly and was discharged about three weeks later.) The men seemed reassured by this, as though to say maybe our wives' health is not so dependent on what we do as we had thought. It is interesting that they chose to ignore the other aspect of these events—the implication that if they would drop dead their wives might rapidly improve.

EVALUATION

It is difficult to assess the value of the group in helping its members or their wives. Both husbands and wives expressed satisfaction with the group meetings, but were relatively inarticulate as to just what they were pleased about. The men spoke of greater "confidence," less "nervousness," and increased ability to "talk things over" with their wives. The women made similar comments, but in addition seemed to benefit from the sharing of guilt that was implicit in the mere fact that their husbands came for therapy. All the women were discharged from the hospital "improved" during the period of the group meetings. Although it is true that not every hospitalized patient goes home, this fact proves little inasmuch as the women did not leave significantly sooner than the hospital average.

The group seemed to be particularly helpful to the men when their wives came home. Usually they had three or four weeks' warning, and there was a perceptible increase in anxiety. The man whose wife's discharge was imminent would bring up a host of questions; those members whose wives had already returned were helpful in reassuring him. The first two or three weeks after discharge were especially difficult. The husband whose wife had just come home usually dominated the sessions at this time, and was likely to be regular in his attendance. In the fourth and fifth week after discharge, there was a pronounced decrease in tension; the man would visibly "settle down."

Attendance was fairly regular. Although there was no particular pressure by the therapist for men to come, of a possible eight there were never fewer than four at a meeting—usually six or seven. The men continued after their wives had left the hospital, and some even after their wives stopped out-

patient therapy. The wives generally encouraged their husbands to come to the group; one man said the night of the meeting was the one night of the week he was sure to find dinner waiting for him when he got home.

Perhaps the most objective sign of change was the behavior of the men in the group situation. They became more expressive of feeling and more honest in their expressions. They talked more about themselves and less about their wives. These changes were dramatized by the advent of a new member. His anxieties, his fears, and his projections were reminders to the others of an age that had passed. Although the older members had voiced the same feelings in the initial meetings, they became somewhat supercilious and impatient. They were particularly adept in pointing out to the new man that what he considered to be his wife's problem was really his own projection. It was the kind of impatience that people who have achieved partial mastery of something that formerly gave them anxiety manifest toward those who are still struggling with the same problem.

The group had another value, economic. In most cases there was considerable reduction in the amount of time various staff members had to devote to the husband. Men who spent half an hour a week talking personally to their wife's therapist plus another fifteen minutes on the telephone, gave up this practice almost entirely. Nurses and social workers also noted that their contacts with the husbands were briefer and less frequent. That this was a real economy was attested by the comments of diverse staff members.

It is a psychiatric platitude that "environment" is an important etiologic factor in mental illness. A vacation, a divorce, a change of job or domicile—such recommendations at one time were the chief tools of psychiatry. With the advent of psycho-

therapy and somatic treatments, the accent fell on the individual patient and many therapists have paid less attention to the environment. Furthermore it became apparent that a disturbed person with a different spouse or job is still disturbed. Besides, more often than not the patient promptly places himself in the same kind of environment he has abandoned.

Yet "environment" is still important, and psychotherapy itself offers one of the best means of altering it, particularly in its most significant elements: The people with whom the patient has to live closely, day in and day out. If a therapist who spends an hour a week with a patient can, as we believe, exert a decisive influence for health or illness, how much more influential must those be who spend several hours with him every day? Group therapy with husbands, wives, parents and others close to the patient would seem to be an economical way to alter the patient's environment in the direction of health, and help those people who spend most time with him to a healthier adjustment.

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Discussion by ESTHER SOMERFELD-ZISKIND, M.D., Los Angeles

The report presented here is of a fascinating experience such as only psychiatrists are permitted in their working hours. We owe Doctors Bowman and Gordon a debt of gratitude for having pointed the way to another therapeutic adjunct in schizophrenia.

It seemed to me, though, that the husbands of these psychotic women in treatment were not being frank with Dr. Gordon. The reason, I believe, was their sensing of Dr. Gordon's resentment of the husbands. After all, he gathered them in a group to save himself time because they represented a nuisance with their numerous calls. I wonder whether he would have gotten more frank expression from them as to their fears and their loyalties to their wives if he had told them why he gathered them together. Also they might have felt less guilty for their wives' illness if he had opened up the subject of their guilt without being too reassuring. They would have had a chance to defend themselves.

More of us should attempt experiments in group therapy.

General Anesthesia in Ophthalmology

GEORGE L. KILGORE, M.D., San Diego

ALMOST ALL PATIENTS confronted with the prospect of an operation upon the eyes have conscious or unconscious fear of pain and of what might happen if the eyes are moved during the procedure.

In an attempt to find a way to relieve this fear, the author in a series of ten cases of bilateral cataract extraction used local anesthesia for the removal of the cataract from one eye, then for the operation on the other eye used a combination of the same local anesthesia and Pentothal® sodium intravenously. All the patients, without being questioned, remarked upon the ease (to themselves) of the second operation. None had known when the operation was done, and all spoke particularly of the absence of disturbing flashes of light. They also remarked that they were free of the mental task of holding the eyes still. All wanted to know why the first operation had not been done under general anesthesia.

Knowing these benefits, a surgeon intending to use general anesthesia can give reassurance to patients before operation. Moreover, the surgeon himself can be more relaxed while carrying out an intra-ocular operation if the patient is asleep.

All patients should have a general physical examination before general anesthesia is given, in order that the anesthetist may select the most appropriate agent. When operation must be done in emergency, circumstances are of course variable and special evaluation is necessary. Patients who are to undergo elective operation not only should have a study of their general condition, but any system disorders like diabetes should be under control. The author does not hesitate to call upon a general practitioner or internist for help when diabetes, extremely high blood pressure or other such complicating conditions are present.

When such precautions are taken, there are very few patients for whom general anesthesia is unsuitable. Selection of the anesthetic agent, which should be discussed with the anesthetist, must take into account the general condition of the patient, the operation to be done and the time required for it. An occasional patient will, when asked, give a history of having had a reaction to procaine or other anesthetic agent in the past. It is important to ask, and impor-

• General or a combination of local and general anesthesia is beneficial in ophthalmic operations. With foreknowledge that they are to be asleep, patients approach operation with less trepidation, and during the procedure the surgeon can be more relaxed.

In a series of 300 cases reviewed, no complications that could be attributed to general anesthesia occurred at the operative site. Nasopharyngeal and tracheal irritation sometimes developed.

Anesthesia should be conducted by a well-trained, alert anesthetist; and the method and the agent should be determined after thorough examination and appraisal of the patient and consideration of the nature of the operation to be done.

tant to avoid use of any agent indicted by the patient's reply.

Very old and very young persons are not well suited to Pentothal anesthesia. For them it is far better to use other agents. Of course ether has a wide margin of safety in children, but the possibility of postoperative vomiting must be considered in relation to what damage it might do to the surgical repair.

It is essential that expert anesthetists be in attendance in all cases of young children, doubly so if the patient has a congenital defect of the heart.

All patients, children and adults, who are to have general anesthesia during an ocular operation, should have an intratracheal tube in place before operation is begun. Either of two types of tube may be used: One has a cuff encircling it and is inflated to fill the trachea completely, and the other is used with a fairly tight fit between the tube and the vocal cords. One patient operated upon by the author died during anesthesia; and although he was a very small, frail child, one must wonder whether the covering over his face and the lack of unobstructed oxygen flow did not in some way contribute to the emergency.

The advent of Pentothal sodium as an intravenous agent stimulated the use of general anesthesia for operations upon the eye. The history of the development and use of Pentothal and morphine as anesthetic agents are satisfactorily summarized and dis-

Presented before the Section on Eye, Ear, Nose and Throat at the 81st Annual Session of the California Medical Association, Los Angeles, April 27 to 30, 1952.

cussed in a number of articles that have appeared during the last few years.^{1, 2, 3, 4, 6} In these articles attention has been drawn to the depressor effect of Pentothal, especially on the centers governing respiration and blood pressure. Warning is given as to the poor tolerance by very young and very old persons.

Attention has been drawn to the need of auxiliary medication, such as atropine, to prevent bronchospasm and laryngospasm during the use of Pentothal. Linn⁵ stated that nausea and vomiting occurred in 4 per cent of patients observed by him. He intimated that these complications were probably due as much to preoperative medications as to Pentothal. He reported one death during Pentothal anesthesia. At autopsy the patient was found to have nephritis, hypertension, chronic hepatitis and cholecystitis.

The use of morphine intravenously for patients undergoing ocular operations has been recommended. Jensen, Haffley and Sarro,⁴ although calling attention to the constant reminders that this anesthetic drug is very dangerous, maintained that allergic forms of bronchial asthma are the only contraindication to its use.

Paralysis of the extraocular muscles following general anesthesia has been reported, but the operations were not on or around the eyes.

In the author's experience since 1934, the combination of local and general anesthesia for ocular operations has been very satisfactory. Intraocular operations are well suited to a combination of the local use of cocaine and/or Pontocaine® drops and intravenous use of Pentothal, or a combination of Pentothal intravenously and a small amount of nitrous oxide, gas and oxygen. The latter combination of agents serves well in cases of cataract extraction in children. Postoperative nausea and vomiting are reduced to a minimum.

For extraocular operative procedures the patient can be given ether or a combination of agents for anesthesia since postoperative nausea and vomiting are not a serious consideration.

What complications attributable to the anesthetic arise during operations? The most disturbing is nausea and vomiting in children who are receiving ether and oxygen or a combination of ether and other agents. An accident of this type is directly attributable to lack of experience or lack of attention on the part of the anesthetist. Redrapping is necessary when vomitus soils the field of operation. Coughing or labored breathing are disturbing during intraocular operations. Anesthetists now use a small amount of curare derivative (tubocurarine or Flaxedil) intravenously for the relaxation of the laryngeal and tracheal muscles.

Coughing and laryngospasm are two complications that have done much to prevent wider use of general anesthesia (Pentothal) for patients undergoing intraocular operations. These complications can be prevented by the use of atropine preoperatively and the use of added anesthetic agents just before removing the tracheal tube and sucking mucus from the throat.

The use of general anesthesia in the office depends upon the common practice in the community and on the nature of the procedure to be carried out. The author uses ether as an anesthetic when making examinations of difficult children and when probing tear ducts. The anesthetic is given in the morning and the patient is not permitted to have food or liquids after 6 o'clock the preceding evening. The local use of Pontocaine or cocaine solution helps to lessen the amount of anesthetic necessary for examinations of the eyes. It is imperative to have a suction device, in working order, on hand at the time the anesthetic is given.

The following observations were made in a review of records of 300 operations performed under a combination of local and general anesthesia:

1. There was no prolapse of the iris, loss of vitreous, rupture of the incision or any other accident which could be attributed to use of general anesthesia.
2. Laryngeal and bronchial irritation developed in a few cases. Irritation of the nasal membranes and the nasopharynx often developed after the use of a nasopharyngeal tube during anesthesia. (The author does not recommend use of a nasopharyngeal tube.)
3. Plaques developed on the vocal cords of one patient following the use of a tracheal tube. The use of Zephiran® as a sterilizing agent was thought to be the cause of irritation. A too tightly fitting intratracheal tube could contribute to such complications.
4. There were no cases of thrombophlebitis following the use of Pentothal.
5. The time of operation varied from ten minutes for a discission to two hours and thirty-five minutes required for repair of orbital and facial disfigurement.

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CASE REPORTS

• Melanoma of the Rectum

Melanoma of the Rectum

RODERICK M. NEALE, M.D., and
JOHN D. BRIGGS, M.D., Los Angeles

IN 1857 Moore⁴ reported upon a 65-year-old man with recurrent melanoma of the rectum treated initially by local excision. This appears to be the first description of melanoma in this location in man, although rectal melanotic tumors had been frequently noted in certain strains of horses. By 1949 there were in the literature reports of 94 cases of melanoma of the anus.⁵ Pack and Livingston⁶ stated that 2 per cent of all melanomas in human beings are located in this area.

In the following case a melanoma appeared first at the mucocutaneous junction of the anal canal, and recurred on two occasions at successively higher levels under the rectal mucosa.

CASE REPORT

A 51-year-old white man was admitted to Wadsworth Hospital on May 2, 1951, because of a recurrent lesion of the rectum. The tumor had been first discovered in June 1949 following passage of several blood-streaked stools. At that time it was 2.5 centimeters in diameter and was treated elsewhere by local excision followed by x-ray therapy. In April 1950 recurrence at the original site was noted and removed. A year later there was a second recurrence and the patient was referred to Wadsworth Hospital for radical excision of the rectum.

The patient had had no symptoms referable to the rectum, other than the previously noted blood-streaked stools. In the family history the only pertinent factor was that the maternal grandmother died of carcinoma of the tongue at the age of 94.

The patient was moderately obese. Just inside the mucocutaneous junction of the rectum was a raised black lesion 1 cm. in diameter. The nodule was freely movable with the mucosa over the deeper layers and was quite firm. There was no enlargement of inguinal nodes. The liver was not palpable.

The microscopic sections from the previous surgical excisions were reviewed and the diagnosis of melanoma was confirmed.

Sigmoidoscopic examination of the lower bowel was carried out but the previously described black nodule in the anal canal was the only abnormality observed.

On May 18, 1951, abdominoperineal resection of the rectum was performed. No evidence of metastatic involvement of either the liver or lymph nodes adjacent to the lower colon was found. The postoperative course was uneventful.

Upon gross pathologic examination the specimen was observed to contain a nodule 3 cm. above the external sphincter (Figure 1). The nodule was 1 cm. in diameter

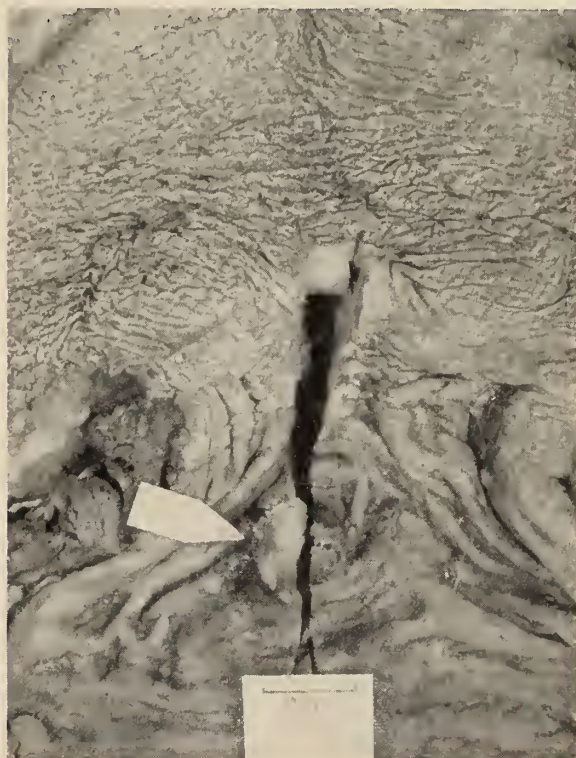


Figure 1.—Melanoma of rectum located 3 cm. above mucocutaneous junction. The cut surface shows pigmentation.

and 0.5 cm. thick. It was blue-brown in color, slightly ulcerated on its superior surface and did not extend through the submucosa. Microscopically the tumor was found to consist of large cells containing melanin (Figure 2). Extension to the lymph nodes was not found.

The patient was last observed April 28, 1952, and no evidence was found of either local or distant recurrence.

DISCUSSION

Dawson² reported in detail studies which concluded that "melanin pigmented tumors are regarded as having their origin in epidermal or neuroepithelial cells and melanin pigment formation in the body is regarded as exclusively an ectodermal function." Willis,⁷ however, expressed belief that melanomas may be formed from mesodermal, ectodermal, or neuroepithelial cells which happen to contain melanin.

Further difference of opinion exists in the literature as to whether melanomas arise primarily in the gastrointestinal tract, or are secondary to lesions in the skin, eye, or central nervous system. Willis, in discussing melanomas of the

From the Surgical Service, Wadsworth Hospital, Veterans Administration Center, and the Department of Surgery, University of California, Los Angeles



Figure 2.—The melanoma is submucosal, being covered with normal rectal mucosa.

gastrointestinal tract, stated: "In such cases, unless meticulous search of every part of the skin, eyes and juxtacutaneous mucous membranes proves the absence of a possible primary growth there and inquiry elicits positive certainty that the patient has never had any skin lesions which might have been the primary source—the primary visceral origin of a melanoma cannot be accepted. I know of no reported cases fully satisfying these strict requirements." Herbut and Manges³ also stated the opinion that melanomas do not originate as primary lesions of the gastrointestinal tract. They pointed out that melanoblasts have not been demonstrated in the small intestine and that primary and secondary growths have similar histological patterns. They noted also

that since 25 years or more may elapse before the appearance of the metastatic tumor, the original lesion may well have been forgotten.

Confusion has arisen in the reporting of cases of melanoma of the rectum owing to the use of conflicting terms and authors neglecting to state whether or not the growth was considered to be primary in the bowel. Braastad, Dockerty and Dixon¹ stated that melano-epitheliomas of the anus and rectum arise from melanoblasts of the anal epithelium and that submucosal spread upward accounts for rectal growths. The conditions observed in the case herein reported support this view.

The recurrence of the lesion after local excision also indicates that initial radical treatment is required in dealing with malignant growth of this type.

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EDITORIAL

The Department of Health, Education and Welfare

AMERICAN MEDICINE reached the high point of its relations to government at 10:30 a.m. on March 14, 1953, when a special session of the House of Delegates of the American Medical Association was addressed by the President of the United States, Dwight D. Eisenhower. This fourth special session of the House in the 104-year history of the A.M.A. met in Washington, D. C., to consider what action should be taken with reference to Reorganization Plan No. 1 of 1953 to create a Department of Health, Education and Welfare. For almost 80 years and as recently as December 1952 the House has taken a stand for a Department of Health with cabinet status in the Federal Government.

Details of the reorganization plan published elsewhere in CALIFORNIA MEDICINE provide not for a Department of Health but for a Department of Health, Education and Welfare—this to be accomplished by elevation and reorganization of the Federal Security Administration to make of it a department with cabinet rank. Because this proposed plan was not in keeping with the time-honored stand of the A.M.A., because the A.M.A. previously had opposed establishment of such a department during the Truman Administration and because the final decision had to be made before June, the Board of Trustees of the association wisely felt that the decision should be made by the House of Delegates and that a special session of it was necessary.

Many physicians and leaders in the A.M.A. had been opposed to the linking together of Health, Education and Welfare in government. This has been

owing chiefly to the questionable need for, the large size of, the doubtful practices of, and the socialistic trends of the Social Security System. There has been potent opposition to the health activities of the government being attached as the small tail on so large, so unfriendly and so unwanted a dog. Furthermore, in the long time view, once such a relationship is established it tends to stick and future administrations less friendly to medicine might find it an excellent situation for a quick grasp to establish socialized, federalized or compulsory medical care.

The present administration including the President, and the Federal Security Administrator, Mrs. Oveta Culp Hobby, has been friendly toward the medical profession. As the President said in his address before the House, his philosophy was such that he was for free enterprise, that he pledged opposition to compulsory and socialized medicine and that he would not make government a "big poobah" of medical affairs. Senator Taft, the majority leader of the Senate, pointed out that the reorganization plan would without question become the law, that the only reason for grouping health, education and welfare was that they were secondary functions of the government, that establishing the F.S.A. as a department would bring it in closer and beneficial contact with the President and other departments of the government which would not be attained while it remained an independent agency, that the functions of the department would be studied by a new commission to be appointed by the President and Congress and that one of the major purposes of the reorganization was to get rid of the influence of F.S.A. policy-makers now protected under Civil Service. In fact the implication was that this was the

only way in which some of the staff members of F.S.A. so well known for their desires to socialize medicine could be eliminated from policy-making jobs in the Department. Congressman Walter Judd (Republican, Minnesota), a well-known physician, urged physicians not again to say, "We're against it," and added that "Stalin may be tough, but I don't think there is anything stronger than entrenched bureaucracy."

With this consideration in mind and with assurance that health was to be given a special position not as a separate bureaucratic sub-department but by establishment of a special assistant to the Secretary who is to be a recognized leader in the medical field with a wide non-governmental experience to review for and advise the Secretary, the House of Delegates approved the report of the Board of Trustees. The report supports the reorganization plan, indicates that it is a step in the right direction, urges that the A.M.A. cooperate to make it successful, suggests that the development of the plan be watched

with great care and interest and notes that the "association reserves the right to make recommendations for amendments in the then existing law if the present plan does not, after a sufficient length of time for development, result in proper advancement in and protection of health and medical science and in their freedom from political control."

For too many years the medical profession and the A.M.A. have been accused of being against almost every step and for nothing constructive. For us as a profession, but not as individuals, public relations have not been good. Now there is an opportunity for us to become the leaders, to see what we can do when given the opportunity for at least four years under a friendly administration to establish the proper relations between government and medicine, to develop that kind of health service in government which long has been needed and to consider carefully the proper relations of the public health aspects of medicine, the medical profession and the private practice of medical care.

LETTERS to the Editor . . .

Rectal Curarization

DELAY AND THUILLIER* of the Faculty of Medicine, Paris, report the successful curarization of rabbits by means of rectal suppositories. Rectal curarization of rabbits follows a definite pattern. First, the ears drop, then there is a softening of the muscles of the neck, then the head drops, and finally there is complete quadriplegia. In case of an overdose this is followed by paralysis of the diaphragm, cessation of

breathing, and death. Intravenous injection of 0.25 mg. of physostigmine will stop the curarization at will at any time or in case of an overdose.

With suppositories containing 0.5 mg. of D-tubocurarine per milligram of body weight curarization of rabbits takes four to six minutes to develop and lasts three to five hours. Similar results were subsequently obtained with neurological and psychiatric patients.

W. H. MANWARING, M.D.
Palo Alto, Calif.

* Delay, J., and Thuillier, J. E., Curarization by rectal suppository, *Science*, 117:57, Jan. 16, 1953.

California MEDICAL ASSOCIATION

NOTICES & REPORTS

The U. S. Department of Health, Education and Welfare

• DR. LOUIS H. BAUER'S LETTER TO THE
MEMBERS OF THE HOUSE OF DELEGATES OF
THE AMERICAN MEDICAL ASSOCIATION

March 5, 1953

I HAVE BEEN REQUESTED to write each member of the House of Delegates a letter so as to bring him up to date on what has transpired since the December meeting of the House.

In December a request was sent to Mrs. Oveta Culp Hobby, the proposed new Federal Security Administrator, for a conference. This conference was finally arranged for February 3, 1953. Attending it were Drs. Bauer, McCormick, Murray, Blasingame, Lull, Howard and Wilson. Our group received a most cordial welcome. General matters pertaining to the Federal Security Agency were explored and ideas exchanged. Mrs. Hobby was asked if she would like to have a committee from the American Medical Association to which she could turn for assistance and cooperation. She replied that she would and asked that we appoint such a committee. It was quite evident, throughout the conference, that cooperation and mutual exchange of ideas would be the order of the day from then on.

Our group left then with the distinct feeling that the door to the Federal Security Agency is wide open to the American Medical Association.

The Board of Trustees later designated the following committee to be of assistance to the Federal Security Agency: Drs. E. L. Henderson, chairman; L. H. Bauer, vice-chairman; Edward J. McCormick, Dwight H. Murray, and F. J. L. Blasingame. Dr. Walter B. Martin was named as an alternate member.

The following day, February 5, Drs. Bauer, McCormick, Murray and Wilson had an opportunity to talk to the President. He, too, was most cordial and a broad discussion of various problems took place. Although our appointment was for thirty minutes, we were there forty-five minutes. We left there, all feeling that medicine has a "friend at court."

The public announcement that the Federal Security Agency is to be raised to the status of an executive department naturally is of great interest to us. I had further correspondence and telephone conversations with Mrs. Hobby and a telephone conversation with the President. As a result of these Dr. Blasingame and I met with the Rockefeller Reorganization Committee on February 18. A general discussion on the medical aspects of the reorganization took place. Following that, I had further telephone conversations with Mr. Rockefeller, and as a result another conference was held with this committee. Those attending from the American Medical Association were Drs. Bauer, McCormick, Murray, Martin, Blasingame, McCarthy, Lull, Howard, and Wilson, and Mr. Steler. This conference took place on February 25.

Some of the officers of the American Medical Association in the meantime had conferred with members of Congress, particularly Senator Taft.

We had been informed that an independent Department of Health or Health Agency would not be proposed. There is a feeling in the administration and in Congress that there are already too many independent agencies and that attempts should be made to reduce rather than expand the number.

It is proposed to change the Federal Security Agency to the Department of Health, Education and Social Security. It will not be departmentalized, but in the Secretary's office there will be a Special Assistant, to the Secretary, for Health and Medical Affairs. All matters pertaining in any way to health or medicine, no matter where in the Department they originate, will have to be cleared through this Special Assistant to the Secretary. In other words, this official will be in charge, under the Secretary, of all health and medical matters in the Department. In addition, this same official will be the representative of the Secretary in all interdepartmental meetings when health is to be discussed, and at all international health meetings. He will also be the Secre-

tary's representative at congressional hearings on health matters pertaining to the Department.

The qualification for the position will be specified as a Doctor of Medicine from non-governmental sources. He will also be the contact between the Department and the American Medical Association, the American Dental Association, the American Hospital Association, the American Public Health Association, and the State and Territorial Health Officers Association.

Details of the reorganization plan, copies of the President's message submitting it and other information have been promised to us for the Special Session of the House on March 14, so that each delegate may have everything in front of him.

The House of Delegates has gone on record several times as desiring a separate Department of Health. Since this proposed plan does not provide for that, but for a plan not heretofore considered, the Board of Trustees did not feel it could take any action, but that the House of Delegates itself should consider the matter and decide what action should be taken by the Association.

Since the matter will in all probability be settled prior to June, it was necessary to call a special session of the House.

LOUIS H. BAUER, M.D.,
President, American Medical Association

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Reorganization Plan No. 1 of 1953

Prepared by the President and transmitted to the Senate and the House of Representatives in Congress assembled, March 12, 1953, pursuant to the provisions of the Reorganization Act of 1949, approved June 20, 1949, as amended.

DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE

Section 1. *Creation of Department: Secretary.*—There is hereby established an executive department, which shall be known as the Department of Health, Education, and Welfare (hereafter in this reorganization plan referred to as the Department). There shall be at the head of the Department a Secretary of Health, Education, and Welfare (hereafter in this reorganization plan referred to as the Secretary), who shall be appointed by the President by and with the advice and consent of the Senate, and who shall receive compensation at the rate now or hereafter prescribed by law for the heads of executive departments. The Department shall be administered under the supervision and direction of the Secretary.

Sec. 2. *Under Secretary and Assistant Secretaries.* There shall be in the Department an Under Secretary of Health, Education, and Welfare and two Assistant Secretaries of Health, Education, and Welfare, each of whom shall be appointed by the

President by and with the advice and consent of the Senate, shall perform such functions as the Secretary may prescribe, and shall receive compensation at the rate now or hereafter provided by law for under secretaries and assistant secretaries, respectively, of executive departments. The Under Secretary (or, during the absence or disability of the Under Secretary or in the event of a vacancy in the office of Under Secretary, an Assistant Secretary determined according to such order as the Secretary shall prescribe) shall act as Secretary during the absence or disability of the Secretary or in the event of a vacancy in the office of Secretary.

Sec. 3. *Special Assistant.*—There shall be in the Department a Special Assistant to the Secretary (Health and Medical Affairs) who shall be appointed by the President by and with the advice and consent of the Senate from among persons who are recognized leaders in the medical field with wide non-governmental experience, shall review the health and medical programs of the Department and advise the Secretary with respect to the improvement of such programs and with respect to necessary legislation in the health and medical fields, and shall receive compensation at the rate now or hereafter provided by law for assistant secretaries of executive departments.

Sec. 4. *Commissioner of Social Security.*—There shall be in the Department a Commissioner of Social Security who shall be appointed by the President by and with the advice and consent of the Senate, shall perform such functions concerning social security and public welfare as the Secretary may prescribe, and shall receive compensation at the rate now or hereafter fixed by law for Grade GS-18 of the general schedule established by the Classification Act of 1949, as amended.

Sec. 5. *Transfers to the Department.*—All functions of the Federal Security Administrator are hereby transferred to the Secretary. All agencies of the Federal Security Agency, together with their respective functions, personnel, property, records, and unexpended balances of appropriations, allocations, and other funds (available or to be made available), and all other functions, personnel, property, records, and unexpended balances of appropriations, allocations, and other funds (available or to be made available) of the Federal Security Agency are hereby transferred to the Department.

Sec. 6. *Performance of Functions of the Secretary.* The Secretary may from time to time make such provisions as the Secretary deems appropriate authorizing the performance of any of the functions of the Secretary by any other officer, or by any agency or employee, of the Department.

Sec. 7. *Administrative Services.*—In the interest

of economy and efficiency the Secretary may from time to time establish central administrative services in the fields of procurement, budgeting, accounting, personnel, library, legal, and other services and activities common to the several agencies of the Department; and the Secretary may effect such transfers within the Department of the personnel employed, the property and records used or held, and the funds available for use in connection with such administrative service activities as the Secretary may deem necessary for the conduct of any services so established: *Provided*, That no professional or substantive function vested by law in any officer shall be removed from the jurisdiction of such officer under this section.

Sec. 8. Abolitions.—The Federal Security Agency (exclusive of the agencies thereof transferred by section 5 of this reorganization plan), the offices of Federal Security Administrator and Assistant Federal Security Administrator created by Reorganization Plan No. 1 (53 Stat. 1423), the two offices of assistant heads of the Federal Security Agency created by Reorganization Plan No. 2 of 1946 (60 Stat. 1095), and the office of Commissioner for Social Security created by section 701 of the Social Security Act, as amended (64 Stat. 558), are hereby abolished. The Secretary shall make such provisions as may be necessary in order to wind up any outstanding affairs of the Agency and offices abolished by this section which are not otherwise provided for in this reorganization plan.

Sec. 9. Interim Provisions.—The President may authorize the persons who immediately prior to the time this reorganization plan takes effect occupy the offices of Federal Security Administrator, Assistant Federal Security Administrator, assistant heads of the Federal Security Agency, and Commissioner for Social Security to act as Secretary, Under Secretary, and Assistant Secretaries of Health, Education, and Welfare and as Commissioner of Social Security, respectively, until those offices are filled by appointment in the manner provided by sections 1, 2, and 4 of this reorganization plan, but not for a period of more than 60 days. While so acting, such persons shall receive compensation at the rates provided by this reorganization plan for the offices the functions of which they perform.

Position Description

Special Assistant to the Secretary (Health and Medical Affairs), Department of Health, Education and Welfare

The Special Assistant to the Secretary will be the top staff policy adviser to the Secretary with respect to health and medical matters. He will have responsibility for reviewing the health and medical programs throughout the Agency and, where necessary,

making recommendations for improvement. On matters of legislative policy where health and medical policies are involved, he will be responsible for making recommendations to the Secretary. This will include review of legislative reports involving health and medical care matters, proposed testimony before congressional committees relating to health and medical care matters, and other related policy statements such as annual reports, etc.

As chief staff policy adviser in the health and medical field, the Special Assistant to the Secretary will represent the Secretary on top level interdepartmental committees concerned with health and medical care matters, such as the Health Resources Advisory Committee to the President. He will have responsibility for liaison on behalf of the Secretary with important non-governmental groups, such as the American Medical Association, the American Dental Association, the American Hospital Association, the American Public Health Association, and the Association of State and Territorial Health Officers. Such liaison will not, of course, supplant liaison by the constituents of the Department but would be broadly representative of the total interests of the Department in the health field. He will, when appropriate, represent the Secretary in making speeches before various groups interested in health and medical problems faced by the Federal Government and particularly by the Department of Health, Education and Welfare.

The Special Assistant to the Secretary will, from time to time, represent the Secretary at various international meetings, such as being a delegate to the World Health Assembly of the World Health Organization, and other major international assignments. Such representation will not, of course, supplant appropriate representation from the Public Health Service, the Children's Bureau and other constituents of the department. The new Department of Health, Education and Welfare will continue to have major and numerous international responsibilities in the field of health as a positive arm of U. S. foreign policy.

As directed by the Secretary, the Special Assistant to the Secretary will see that related health and medical problems arising in any of the various constituents having health or medical care programs are properly coordinated. These constituents are: the Public Health Service, the Social Security Administration (including the Children's Bureau), the Food and Drug Administration, the Office of Vocational Rehabilitation and St. Elizabeth's Hospital. Coordination between related activities of these constituents is a matter of very substantial importance.

In short, the Special Assistant to the Secretary will be the top staff policy adviser to the Secretary on health and medical matters, will represent the

Secretary in important external relationships of the department with national and international bodies concerned with health and medical matters, and will, as needed, coordinate related health and medical programs within the department.

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Letter of Transmittal

To the Congress of the United States:

I transmit herewith Reorganization Plan No. 1 of 1953, prepared in accordance with the provisions of the Reorganization Act of 1949, as amended.

In my message of February 2, 1953, I stated that I would send to the Congress a reorganization plan defining a new administrative status for Federal activities in health, education, and social security. This plan carries out that intention by creating a Department of Health, Education, and Welfare as one of the executive departments of the government and by transferring to it the various units of the Federal Security Agency. The department will be headed by a Secretary of Health, Education, and Welfare, who will be assisted by an Under Secretary and two assistant secretaries.

The purpose of this plan is to improve the administration of the vital health, education, and social security functions now being carried on in the Federal Security Agency by giving them departmental rank. Such action is demanded by the importance and magnitude of these functions, which affect the well-being of millions of our citizens. The programs carried on by the Public Health Service include, for example, the conduct and promotion of research into the prevention and cure of such dangerous ailments as cancer and heart disease. The Public Health Service also administers payments to the states for the support of their health services and for urgently needed hospital construction. The Office of Education collects, analyzes and distributes to school administrators throughout the country information relating to the organization and management of educational systems. Among its other functions is the provision of financial help to school districts burdened by activities of the United States Government. State assistance to the aged, the blind, the totally disabled, and dependent children is heavily supported by grants-in-aid administered through the Social Security Administration. The old age and survivors insurance system and child development and welfare programs are additional responsibilities of that administration. Other offices of the Federal Security Agency are responsible for the conduct of Federal vocational rehabilitation programs and for the enforcement of food and drug laws.

There should be an unremitting effort to improve those health, education and social security programs which have proved their value. I have already recom-

mended the expansion of the social security system to cover persons not now protected, the continuation of assistance to school districts whose population has been greatly increased by the expansion of defense activities, and the strengthening of our food and drug laws.

But good intent and high purpose are not enough; all such programs depend for their success upon efficient, responsible administration. I have recently taken action to assure that the Federal Security Administrator's views are given proper consideration in executive councils by inviting her to attend meetings of the Cabinet. Now the establishment of the new department provided for in Reorganization Plan No. 1 of 1953 will give the needed additional assurance that these matters will receive the full consideration they deserve in the whole operation of the government.

This need has long been recognized. In 1923, President Harding proposed a Department of Education and Welfare, which was also to include health functions. In 1924, the Joint Committee on Reorganization recommended a new department similar to that suggested by President Harding. In 1932, one of President Hoover's reorganization proposals called for the concentration of health, education and recreational activities in a single executive department. The President's Committee on Administrative Management in 1937 recommended the placing of health, education and social security functions in a Department of Social Welfare. This recommendation was partially implemented in 1939 by the creation of the Federal Security Agency—by which action the Congress indicated its approval of the grouping of these functions in a single agency. A new department could not be proposed at that time because the Reorganization Act of 1939 prohibited the creation of additional executive departments. In 1949, the Commission on Organization of the Executive Branch of the Government proposed the creation of a department for social security and education.

The present plan will make it possible to give the officials directing the department titles indicative of their responsibilities and salaries comparable to those received by their counterparts in other executive departments. As the Under Secretary of an executive department, the Secretary's principal assistant will be better equipped to give leadership in the department's organization and management activities, for which he will be primarily responsible. The plan opens the way to further administrative improvement by authorizing the Secretary to centralize services and activities common to the several agencies of the department. It also establishes a uniform method of appointment for the heads of the three major constituent agencies. At present, the Surgeon General and the Commissioner of Education are ap-

pointed by the President and confirmed by the Senate, while the Commissioner for Social Security is appointed by the Federal Security Administrator. Hereafter, all three will be Presidential appointees subject to Senate confirmation.

I believe, and this plan reflects my conviction, that these several fields of Federal activity should continue within the framework of a single department. The plan at the same time assures that the Office of Education and the Public Health Service retain the professional and substantive responsibilities vested by law in those agencies or in their heads. The Surgeon General, the Commissioner of Education and the Commissioner of Social Security will all have direct access to the Secretary.

There should be in the department an Advisory Committee on Education, made up of persons chosen by the Secretary from outside the Federal Government, which would advise the Secretary with respect to the educational programs of the department. I recommend the enactment of legislation authorizing the defrayal of the expenses of this committee. The creation of such a committee as an advisory body to the Secretary will help ensure the maintenance of responsibility for the public educational system in state and local governments while preserving the

national interest in education through appropriate federal action.

After investigation I have found and hereby declare that each reorganization included in Reorganization Plan No. 1 of 1953 is necessary to accomplish one or more of the purposes set forth in section 2(a) of the Reorganization Act of 1949, as amended. I have also found and hereby declare that by reason of these reorganizations, it is necessary to include in the reorganization plan provisions for the appointment and compensation of the new officers specified in sections 1, 2, 3, and 4 of the reorganization plan. The rates of compensation fixed for these officers are, respectively, those which I have found to prevail in respect of comparable officers in the executive branch of the government.

Although the effecting of the reorganizations provided for in the reorganization plan will not in itself result in immediate savings, the improvement achieved in administration will in the future allow the performance of necessary services at greater savings than present operations would permit. An itemization of these savings in advance of actual experience is not practicable.

DWIGHT D. EISENHOWER

The White House, March 12, 1953.

Report of A.M.A. Board of Trustees

Presented by Dwight H. Murray, M.D., Chairman, March 14, 1953

The House of Delegates of the American Medical Association has for nearly 80 years been on record as favoring an independent Department of Health in the Federal government. The reason for this stand has been that the House has felt that health and medicine should be given a status commensurate with their dignity and importance in the lives of the American people, and that they should be completely divorced from any political considerations.

The Board of Trustees, after a careful study of the policy of the American Medical Association with respect to the administration of health activities in the Executive Branch of the government and after studying the Reorganization Plan for elevation of the Federal Security Agency to Cabinet status submitted by President Eisenhower to the Congress, finds that Reorganization Plan No. 1 of 1953 provides for a Special Assistant, to the Secretary, for Health and Medical Affairs. This provision is a step in the right direction which should result in centralized coordination under a leader in the medical field of the health activities of the proposed department. Health, therefore, is given a special position. The proposed plan, properly administered, will permit more effective coordination and administration of the health activities of the new department without interference or control by other branches.

Previous attempts to raise the Federal Security Agency from an independent agency to the level of an Executive Department have been opposed by the Association because the plan did not meet these aims.

Inasmuch as Federal health benefits and programs are established by the Congress, an administration bent on achieving the nationalization of medicine cannot reach that goal except with the support of Congress. Therefore, an organizational plan through which Federal health activities are administered, although important, is not nearly so vital an issue as the policies adopted by the Congress.

The Board of Trustees recommends that the House of Delegates reaffirm its stand in favor of an independent Department of Health but that it support the Reorganization Plan No. 1 of 1953 as being a step in the right direction; that the American Medical Association cooperate in making the plan successful and that it watch its development with great care and interest.

It should be understood, however, that the Association reserves the right to make recommendations for amendment of the then existing law and to continue to press for the establishment of an independent Department of Health, if the present plan does not, after a sufficient length of time for development, result in proper advancement in and protection of health and medical science and in their freedom from political control.

The Treatment of Cancer with "Laetriles"

A Report by the Cancer Commission of the California Medical Association

THE INFORMATION that a new agent designated as Laetrile was being advocated for the treatment of cancer first came to the officers of the Cancer Commission of the California Medical Association in the form of inquiries from a number of magazines with national circulation in September 1952. Within the next several weeks following these original inquiries, information was sought by representatives of the major news services and by a majority of the metropolitan daily newspapers in California, usually through the science editors of these newspapers. In one instance we are informed a list of patients was given to a newspaper by a physician, who invited the representative of the newspaper to interview and photograph the patients at their homes as examples of the dramatic results of Laetrile treatment. The need for a thorough study of the claims which were being made finally became apparent when a member of the attending staff of the Los Angeles County Hospital requested permission for the investigational use of Laetrile in cancer in that institution. The request was originally presented to the tumor board of the Los Angeles County Hospital and was denied, but subsequently limited permission for the trial use of Laetrile in the hospital, upon patients informed and assenting, was obtained through another committee of the hospital.

1. *Nature of the treatment method.* Laetrile is supposed to affect malignant neoplasms by "focally triggering off lethal quantities of nascent hydrogen cyanide." The term Laetrile is derived from the fact that the chemical is a laevo-rotary-nitrile. It is claimed that this type of therapy was first used in human cancer by Ernst T. Krebs, Sr., shortly after 1920, when "substantial clinical results" were obtained from the use of a beta-cyanogenetic glucoside named amygdalin. Amygdalin is readily obtained as an extract of apricot pits.

The claim made during 1952 by Mr. Ernst T. Krebs, Jr., was that he had synthesized a new Laetrile designated roughly as beta-cyanophoric-glucuronide which, in the presence of an enzyme, beta-glucuronidase, released quantities of nascent hydrogen cyanide. As a significant number of cancers previously have been demonstrated to develop greater amounts of beta-glucuronidase than most non-neoplastic tissues, it was maintained that the "triggering" effect of the glucuronidase on the Laetrile in cancer could produce release of free HCN in such amount as to be lethal for the cancer cell with some degree of specificity. The fact that a margin of safety exists is maintained to be due to the excess of the enzyme beta-glucuronidase in cancerous tissue.

Subsequent to our first acquaintance with the stated chemical formula of this synthetic Laetrile, Mr. Krebs has stated that related synthetic Laetriles have been developed, and he now refers to the product offered for clinical use as "Laetriles."

In addition to the foregoing sort of chemical theory offered by the proponents of this preparation they state that the fundamental biologic rationale for Laetrile therapy derives from a unitarian or trophoblastic theory of cancer, concerning which doctrine Krebs *et al.* have previously published a long treatise. So emphatic is their conviction, that Mr. Krebs has stated in correspondence that no physician should use Laetrile who does not subscribe wholeheartedly to the unitarian theory of the genesis of cancer, and that no physician can use Laetrile intelligently unless he is indoctrinated in this theory.

2. *Proponents of Laetrile treatment.* Chief claimant to the development of synthetic Laetrile is Mr. E. T. Krebs, Jr., who designates himself as a research biochemist. Associated with him is his father, Ernst T. Krebs, Sr., M.D., of San Francisco, and B. A. Krebs, D.O. Laetrile and other drugs are produced and distributed by the John Beard Memorial Foundation, organized by the Krebs and in honor of a Scottish anatomist who is said to be the originator of the unitarian theory of cancer. There are actually two John Beard Memorial Foundations, one of which is incorporated as a non-profit affair, while the other is just a "foundation."* In past years the Krebs have produced and advocated another agent for the treatment of cancer, chymotrypsin. Chymotrypsin was also said to derive its rationale in cancer from the unitarian theory of Beard, and although chymotrypsin has been quite discredited as having any effect on cancer, it is still sold and used in a limited fashion both for cancer, and for such other purposes as dissolution of blood clots in cerebral and other thromboses.

Mr. Krebs also claims to have synthesized "vitamin B₁₅," which is advocated for use in arthritis and cardiovascular disease. Various other esoteric products are distributed by the John Beard Memorial Foundation, concerning which the Cancer Commission has little or no information.

* Note: The addresses of the two "John Beard Memorial Foundations" in San Francisco are, respectively, 642 Capp Street and 1095 Market Street. These foundations are not connected. There is also the "Krebs Research Foundation of Los Angeles," and the "Butterworth Cancer Research Grants, Inc., Los Angeles." The latter was founded by Mr. Bert Butterworth, publisher and editor of *West Coast Druggist*, with offices at 1606 N. Highland Avenue, Hollywood; the founders are Mr. A. A. Butterworth, Mrs. A. A. Butterworth, and Mr. A. W. Butterworth.

3. *Experimental evidence offered.* No satisfactory experimental evidence has been provided. Mr. Krebs states that he has demonstrated *in vitro* the triggering action of "tumor glucuronidase" on Laetrile to release nascent HCN. The Secretary of the Cancer Commission visited Dr. Ernst T. Krebs, Sr., in an attempt to obtain definitive information concerning experimental work, including toxicity tests and any available data concerning the use of Laetrile in experimental neoplasms. Dr. Krebs stated that limited trials of toxicity in laboratory animals had been performed with satisfactory results, but that the animals had been destroyed, as had the records of these trials. Dr. Krebs stated, in conversation with the Chairman of the Cancer Commission, that following demonstration of the above *in vitro* phenomenon, and satisfactory tests for toxicity, there was no point in using the agent on experimental neoplasms and that he preferred to see the agent used forthwith in human cancer.

4. *Clinical evidence offered by proponents of Laetrile.* A verbal report of the effect of Laetrile on several cases of human cancer was offered to the Secretary of the Cancer Commission by Dr. Krebs, Sr. One of these supposedly dramatic clinical situations will be representative. The story concerned a young man with a "huge cancer of the sigmoid and obstruction" (according to Dr. Krebs). The patient was "critically ill." Dr. Krebs stated that within a few minutes of administering the first dose of Laetrile the patient "could feel the action of the drug in the cancer and had a bowel movement with dramatic relief of his obstruction." Inquiry revealed that the patient had been in the Stanford University Hospital eight years previously with diffuse polyposis of the colon and rectum; he refused surgery. Two years previously he was found to have rectal carcinoma and again refused surgery. Two weeks before going to Dr. Krebs he was found by clinical and x-ray examination to have extensive rectal cancer, plus the diffuse polyposis coli, but absolutely no obstruction!

5. *Autopsy data offered by proponents of Laetrile.* None.

6. *Experimental evidence developed by the Cancer Commission and independent investigators.* At one medical center in Southern California an experienced experimentalist and pathologist in cancer tested Laetrile in a small group of A-mice carrying C-1300 neuroblastoma, giving 3 to 4 times the dosage employed in patients on a weight for weight basis. A similar number of control animals were used under appropriate conditions. There was no recognizable effect, gross or microscopic. The final observations were made in mice in which the neoplasms became so large under treatment with Laetrile that they were autopsied shortly before the

progression of the tumor would have produced their death. It should be noted that the C-1300 neuroblastoma is a very labile neoplasm, easily controllable by a single dose of 500 roentgens of x-radiation or by one milligram per kilogram of nitrogen mustard.

A supply of Laetrile was submitted to Dr. A. P. Rinfret of the department of chemistry of Stanford University, and on January 23, 1953, Dr. C. Griffin of that department submitted the following report:

Initially we attempted to find out how much of the preparation laboratory mice could be injected with. Two or four mg. injections had no apparent ill effects on Swiss mice. Thirty dba line 2 mice were inoculated with acute lymphatic leukemia. Two days after the tumor inoculation half of these animals were given daily injections (s.c. 2 mg. per day, the Laetrile was dissolved in saline such that 1 cc. contained 10 mg.). The remaining animals were maintained as tumor controls. All of the controls died in the period from 11 to 13 days following the tumor inoculation. Two of the Laetrile treated animals died before the 10th day, presumably from the drug itself, and the remaining animals all died between the 11th and 13th days. From this single observation involving an acute leukemia, the Laetrile exerted no effect whatsoever on the course of the disease.

At the present time we are injecting Laetrile into mice bearing ear tumors. Daily injections have been made for the past four weeks. At this time it would not appear that the drug has altered the course of these skin tumors. One other point may be worthy of mention. We were informed that the brown bottles contained 50 mg. of Laetrile while actually we observed that these vials contained from 25 to 35 mg. of this drug as determined by weighing on our analytical balances. A further report will be made when more data have been obtained.

John B. Field, M.D., who conducts a project in experimental screening of potential chemotherapeutic agents at U.S.C., reported as follows:

Laetrile was studied in the cancer screening program of this department. When given at a level of 500 mg./kilogram to mice with implanted Crocker sarcoma 180, no inhibition of tumor size was obtained. This is in distinct contrast to the marked inhibition obtained in this tumor with doses of triethylene melamine at a level of .75 mg./kilo and with amethopterin at a dose of 1.5 mg./kilo.

TOXICITY STUDIES

The Laetrile was dissolved in saline solution and given by stomach tube to mice and found to be safe at all doses below 300 mg./kilo. However, at all oral levels of 400 mg./kilo and higher, the animals expired. Deaths were relatively in a matter of minutes with 500 mg. or higher and a matter of approximately one hour at 400 mg./kilo.

7. *Clinical evidence discovered by the Cancer Commission.* Following the initiation of the use of Laetrile at the Los Angeles County Hospital by a member of its staff, the Tumor Board and the Research Committee of the hospital decided, with the approval of the administration, that the extraordinary claims which were being made for the agent could best be either verified or disproved by a carefully controlled clinical investigation. The Tumor Board appointed a group from its Committee on

TABLE 1.—Treatment of Cancer with Laetriles.
Summary, January, 1953.

Total patients treated.....	44
Alive—no evidence of cancer.....	1*
Alive—with cancer	17
Static	6
Progressive	8
Terminal	3
Untraced with disease at last note.....	7
Dead	19
Autopsies	9

* Pre-invasive carcinoma uterine cervix, biopsy diagnosis; "post-treatment" biopsy failed to show the lesion. Microscopic sections not available.

Chemotherapeutic Agents to set up and direct the investigation, the group consisting of a clinician with special experience and interest in cancer therapy, a tumor pathologist, a biochemist and a senior resident. A substantial grant was obtained from a private foundation for the support of the investigation. The proposal was to treat a series of some 30 to 50 patients over a period of six months and to follow these patients carefully over a further period of six months, recognizing that while the true effectiveness of a therapeutic agent for cancer can only be determined by long range observations over a period of years, the initial response and short term follow-up will serve to indicate whether or not an agent is worthy of further trial.

The clinician in charge of the proposed investigation at the Los Angeles County Hospital then began a frustrating experience in an attempt to obtain the promised supply of Laetrile. By this time a "foundation" had been set up in Los Angeles by the Krebs, which organization they designated as the Crabtree Research Foundation, with a Mr. C. W. Wylie as business manager. Although Laetrile was being freely issued to certain physicians for use in their offices for the treatment of cancer, Mr. Wylie and Mr. Krebs offered repeated and various excuses why Laetrile could not be furnished for the hospital investigation. Over a period of several weeks repeated assurances were given that Laetrile would be made available. Finally a communication was received in which a set of criteria was set forth, the observance of which would result in a supply of Laetrile becoming available. Most of the criteria were acceptable and conformed with good practice in pursuing a clinical investigation, but one demand was that a physician who is not a member of the attending staff of the hospital, Dr. Clifford L. Bartlett of Pasadena, be placed in charge of the investigation. The medical director of the hospital properly replied that such a demand could not be complied with, and emphasized the fact that such an investigation should be carried out by completely unbiased workers. Shortly thereafter a communication was received from Dr. Bartlett in which he

undertook to notify officially the Los Angeles County Hospital that the use of Laetrile was being denied the hospital, and implied that the proposed investigation was set up with the intent of discrediting the agent. In this letter Dr. Bartlett also implied that he had done the original developmental work with Laetrile together with a biochemist, and that later the Krebs had entered the picture.

With this avenue of direct investigation thus closed, the Cancer Commission undertook to obtain information as to the clinical course of patients under treatment. On November 6, 1952, the chairman of the Cancer Commission, by invitation, reviewed a group of eight patients under treatment with Laetrile for cancer by various physicians at a sanitarium in Santa Monica. Six other patients had begun treatment with Laetrile at the Los Angeles County Hospital as described above. From these and other sources the Commission has been able to collect information on a total of 44 patients as listed in Table 2. All of the patients were treated by physicians in Southern California except two reported by Ernst T. Krebs, Sr., M.D., and one by a urologist in New Jersey.

In Table 1 is summarized the follow-up as far as it has been obtainable as of January, 1953. The information thus recorded constitutes proof that *no objective benefit* has been realized by the use of this agent in cancer. The clinical observations of several members of the Cancer Commission who have reviewed the information collected, and in some instances had an opportunity of seeing the patients thus treated, indicate that Laetrile may exert a temporary metabolic effect, probably on nitrogen metabolism. Thus some of the patients have an increase in sense of well being and appetite, and temporary gain in weight of the sort that is frequently observed with the use of any of a number of non-specific agents. Claims have been made that Laetrile produces relief of pain in cancer, but this observation has not been verified.

Interviewing the claims which have been made for the effectiveness of Laetrile in cancer, observers for the Commission have been impressed by the fact that in almost every instance the alleged therapeutic results were ascribable to other factors. Most of the alleged improvement occurring with Laetrile was associated with one or more of the following events in the patient's disease:

(a) Subjective improvement was interpreted as being evidence of the agent's affecting the neoplasm, rather than being due to the general effect on the host, whether by metabolic or psychologic reasons. Thus, all of the physicians whose patients were reviewed spoke of increase in the sense of well being and appetite, gain in weight and decrease in pain, as though these observations constituted evidence of definitive therapeutic effect. Several patients were seen with

objective evidence of progressive neoplastic disease, two of whom came to autopsy within several weeks of their treatment with Laetrile, and yet their subjective response of increased intake of food, or the development of a euphoric mood, or some slight reduction in their use of narcotics, was accepted as objective evidence of improvement under treatment.

(b) Phases in the natural history of malignant neoplasm not infrequently observed in patients who are receiving no treatment whatever were interpreted as being due to the therapy employed. Thus a woman on exploratory laparotomy was found to have a bulky ovarian carcinoma with extensive peritoneal implants. Shortly after this surgical procedure, at which nothing more than biopsy for confirmation of the diagnoses was done, she began treatment with Laetrile. Her subsequent improvement generally, the failure of the ascites to recur, and the fact that she became ambulatory and fairly active, were interpreted as therapeutic effect. It is common knowledge among clinicians of experience that occasional patients with widespread peritoneal carcinomatosis will exhibit remarkable spontaneous arrest, or even regression of their disease following simple exploratory procedures. The same observation has been made in patients explored with the finding of extensive tuberculous abdominal lesions.

(c) Most often the patients reported as showing regression of cancer with Laetrile were either receiving concurrent treatment by other methods, or had in their recent past been treated by some more conventional techniques and were exhibiting a degree of control of their disease entirely attributable to the previous treatment. An example of a situation of this sort was illustrated by a man who was presented to a member of the Commission as being a dramatic example of control of bronchogenic carcinoma, with metastases, by Laetrile. Serial roentgenograms were shown of a patient who had a left pulmonary apical lesion, with enlarged left supraclavicular nodes, biopsy of one of which had shown metastatic carcinoma compatible with a primary bronchogenic lesion. Over a period of some three months, during which time he had had treatment first with chymotrypsin, and then with Laetrile, the roentgenograms showed almost complete regression of the pulmonary lesion. When the patient was examined there was noted a residual erythema and early tanning of the skin over a rectangular area which lay directly over the pulmonary lesion, and extended upward over the supraclavicular area. Inquiry revealed that the patient had, some six weeks previously, completed a full course of high voltage x-ray therapy, but the physician who had employed the Laetrile was unaware that the radiation had been directed toward the pulmonary lesion, thinking that anatomically the field had covered only the lymphnodal metastases.

(d) A few of the patients treated did not have proof of the presence of cancer in the form of histological diagnoses, the evidence being more or less inferential, as radiographic observation of lesions in the lung, or a surgeon's diagnosis of a lesion as cancerous on observations of gross pathology at operation, without confirmation with biopsy.

(e) Very few of the clinical records to which the Cancer Commission has had access contain any sort of satisfactory evidence as to objective, accurate evaluation of the progress of the primary neoplasm or its metastases while under treatment. In the instance of accessible lesions there was no record of any actual measurement of the presenting neoplasm.

In short, the clinical observations offered on the course of patients treated with Laetrile are all too frequently distorted by a lack of appreciation of the natural history of cancer on the part of the physi-

TABLE 2.—Clinical Summary—Laetrile.

No. and Diagnosis	Present Status	Autopsy
1. Multiple myeloma	Alive with disease	
2. Squamous ca. lt. antrum	Alive with disease	
3. Not recorded	Active disease	
4. Adenoca. of ovary with metastases	Terminal	
5. Ca. of the vulva	Progressive disease	
6. Pulmonary and skeletal metastases	Progressive disease	
7. Adenoca. of ascending colon, Gr. III with metastases	Not known	
8. Melanoma—primary in scalp	Progressive disease	
9. Adenoca. of lt. breast, Gr. III with metastatic adenoca. of axillary nodes Cystic adenoca. of the ovary	Bedridden	
10. Ca. of right ovary	Alive with disease	
11. Metastatic tumor causing obstruction rt. kidney	Progressive disease	
12. Multiple myeloma	Active disease	
13. Ca. rt. breast, Gr. III	Progressive disease	
14. Papillary serous cyst-adenoca. Gr. II, lt. ovary with extensive metastases	Not known	
15. Testicular tumor	Died	Yes
16. Neoplasm involving entire stomach with extensive metastases	Unimproved	
17. Papillary epidermoid ca. low grade, gingiva	Active disease	
18. Squamous epithelioma, primary lt. lung upper lobe, with metastases	Alive with disease	
19. Postop. adenoca. rt. breast, Gr. IV	Alive with disease	
20. Preinvasive epidermoid ca. of uterus	Well	
21. Infiltrating epidermoid ca., Gr. II-III, uterine cervix, Gr. IV	Alive with disease	
22. Hypernephroma with metastases	Died	No
23. Metastatic ca.—primary in ovary	Died	No
24. Ca. of rectum	No change	
25. Ca. of colon	No change	
26. Ca. of lung	Bedridden	
27. Ca. of bladder	Progressive disease	
28. Metastatic ca. of liver	Died	Yes
29. Reticulum cell lymphosarcoma	Died	Yes
30. Gastric carcinoma	Died	Yes
31. Ca. of breast	Died	Yes
32. Ca. of colon	Died	Yes
33. Ca. of cervix uteri	Died	Yes
34. Ca. of pancreas	Died	Yes
35. Teratoma of testis	Died	Yes
36. Ca. of breast	Died	No
37. Ca. of breast	Died	No
38. Leukemia	Died	No
39. Invasive ca. of uterus	Died	No
40. Adenoca. rt. alveolar ridge, massive neck metastases	Died	No
41. Ca. of breast, metastases	Died	No
42. Sq. cell ca. rt. lung	Died	No
43. Anaplastic adenoca., primary site unknown	Died	No
44. Generalized carcinomatosis of abdomen	Not known	

cian using the agent. This is not to say that the physicians in such a situation are not without ability in their own field. An internist, however, may

have little knowledge of the natural history, and response to treatment, of some forms of gynecologic or urologic cancer. Generally there has also been a failure to differentiate between subjective and objective response, and specific and non-specific effects of treatment.

One further example of an unwarranted claim for this agent is the instance of a patient who was treated for a preinvasive carcinoma of the uterine cervix. The reported observation of carcinoma *in situ* being present in the pre-treatment biopsies, is of no possible significance. It is known that carcinoma *in situ*, particularly in the uterine cervix, is capable of undergoing spontaneous regression. Further, it has been established repeatedly that occasional women showing this lesion on biopsy will come to total hysterectomy, and the pathologist will be unable to find further malignant change in the surgical specimen even with a large number of serial sections of the cervix. Finally the differentiation between atypical epithelial hyperplasia and actual preinvasive carcinoma may be a debatable issue in some instances, and the Commission has not had an opportunity to have the sections in this particular case reviewed.

8. *Autopsy data reviewed by the Cancer Commission.* Adequate information in the instance of six autopsies of patients treated for cancer with Laetrile and microscopic sections of the neoplasm were obtainable for review in nine cases. The material from six of these autopsies was collected at one time, wet tissue was obtained from the pathologist who did the autopsies, and sets of microscopic sections were prepared for review. The cases so collected at this time appear in Table 2 as Numbers 28 to 33 inclusive. This material was sent to three consultants who have had particular experience and interest in tumor pathology, Louisa E. Keasbey, M.D., John W. Budd, M.D., and J. L. Zundell, M.D. Subsequently microscopic sections were obtained from autopsies done in three additional cases appearing in Table 2 as Numbers 13, 34 and 35. Two of these latter cases were reviewed for the Commission by Weldon K. Bullock, M.D. and the other by A. R. Camero, M.D. In addition, the sections from the original group of six autopsied patients were submitted to Fred W. Stewart, pathologist to the Memorial Center for Cancer and Allied Diseases in New York.

The unanimous opinion of these consultants was that in no instance could any recognizable effect of a chemotherapeutic agent be observed in the histology of these various neoplasms. Some of the proponents of Laetrile had reported microscopic observations in the form of necrosis and hemorrhage in some instances, and sclerosis in others, which they interpreted as being the result of specific action of Lae-

trile on the neoplasm. Although both of these changes were observed by the consultants in a number of the cases studied, such changes in each instance were entirely consistent with vascular changes, necrosis and stromal sclerosis regularly seen in such neoplasms, both treated and untreated. Even in those cases showing considerable necrosis, particularly in hepatic metastases, there were invariably large areas of well preserved and viable tumor tissue. No evidence of cytotoxic changes was observed by any of the consultants. Dr. Fred W. Stewart reported, "I don't see anything in any of these cases that is the least bit suggestive of treatment effect, nor do I see anything that is foreign in appearance to appearances at autopsy of any cases of the corresponding type."

9. *Consultants' reports.* As outlined under Item 1 of this report the claim by Krebs and his associates for the possible value of the Laetriles in the treatment of cancer was based on the concept that an excess of the enzyme beta-glucuronidase in cancer tissue acted as a focal trigger mechanism in producing the release of free HCN from the Laetriles, and thus there might be a specificity of parenterally administered Laetrile on foci of cancer in the host. In a copy of a manuscript written by Ernst T. Krebs, Jr. *et al*, presumably for publication, the following statements are made:

(a) That the natural nitriles as obtained from apricot pits are beta-cyanophoric glucosides, that these natural glucosides were used by Krebs Sr. in the early '20s of this century with "substantial clinical results" due to the presence of a "beta-cyanogenetic glucoside (amygdalin)."

(b) The claim of Krebs Jr. that he has synthesized a laetrile which he designates as a beta-cyanophoric glucuronoside. The manuscript states that "the natural laetriles have been abandoned for the more specific synthetic laetrile tailored as specific glucuronosidic substrates for the tumor beta-glucuronidase." The manuscript also states that the synthetic laetrile has the advantage of being a smaller molecule with less possibility of proving antigenically or otherwise reactive.

It seemed essential, therefore, to obtain expert opinion as to the theoretical basis for this supposed action, and to obtain an analysis of the product distributed by Krebs as Laetrile.

The opinion of Dr. Jesse P. Greenstein, chief of the laboratory of biochemistry at the National Cancer Institute was obtained in respect to the distribution of beta-glucuronidase in neoplastic and non-neoplastic tissues, and as to the implication that there was a "tumor" beta-glucuronidase enzyme. The fact is, reported Doctor Greenstein, that beta-glucuronidase is found in all tissues of the animal body and in particularly high concentration in spleen, liver and endocrine organs, as well as in plasma and in tumors arising from estrogen influenced tissues. Per gram of tissue the spleen and liver have a higher concentration of beta-glucuronidase than do

most tumors, and these normal organs together weigh far more than most tumors. In other words, there is much more "normal" beta-glucuronidase than "tumor" beta-glucuronidase in any animal body.*

For analysis samples of Laetrile were submitted to the chemical laboratory of the American Medical Association, in the form of a box of four ampules containing a white crystalline powder and labelled as Laetrile. Comparison of this material was carried out by various chemical methods with a sample of amygdalin purchased on the open market. Comparison was also made between the two materials by ultra-violet absorption spectra. The conclusion of this analysis and comparative study was that the Laetrile tested was essentially amygdalin with a small amount of other material present.

An analysis on samples submitted as Laetrile is being done by John W. Mehl, M.D., professor of biochemistry at the University of Southern California. A preliminary report was submitted by Dr. Mehl on February 27, 1953, as follows:

We have tested the material for the presence of carboxyl groups, which must be present in a *glucuronoside*. The amount is so small that this could constitute only about 1 per cent of the total material. I would conclude that the material, if a glycoside, is probably a glucoside as suggested by the examinations of others.

I also made an attempt to hydrolyze the material with beta-glucuronidase, and to collect any evolved HCN by inserting a wick of filter paper which had been moistened with dilute NaOH in the stopper. After 48 hours at 25° C, no HCN was detectable by the alkaline picrate test, carried out as a spot test.

These results are inconclusive, and will be extended, but they do not support the claims made for Laetrile.

10. *General comments.* The efforts of the Cancer Commission to develop information concerning the Krebs and their various foundations, the distribution of Laetrile and its use by a number of physicians have been attended by a constant series of conflicting statements, claims being made and then denied, supplies of Laetrile repeatedly being promised for clinical or experimental use and eventually refused, and above all repeated implications that the intent of the Cancer Commission was only to discredit out of hand this proposed treatment for cancer. In one of a series of long communications Mr. Krebs remarked "it is extremely unlikely that any paper describing positive findings for Laetrile could achieve early publication in J.A.M.A., though it is virtually a certainty that a paper describing no results would find ready acceptance." At times Mr. Krebs has said that he makes no claim for any established value of Laetriles in cancer, at other times he describes the remarkable results obtained—offering as supportive evidence the sort of necrosis referred to

in the description of the autopsy material in this report. Mr. Krebs also wrote to the Cancer Commission maintaining that "during the past 50 years a number of terminal cancer patients have recovered as the result of the use of either trypsin or chymotrypsin." Dr. Krebs, Sr., however, when pressed by the secretary of the Cancer Commission, stated that he could not produce any examples of cancer control by chymotrypsin.

In further communication with the Commission, Mr. Krebs wrote to outline his ideas of how a clinical project should be set up to evaluate the efficiency of a treatment for cancer, and wrote that they had criteria other than that of tumefaction by which they evaluated Laetrile therapy.

Their preferred criteria as listed were: (1) Decrease in pain, (2) Increase in appetite, (3) Increase in weight, (4) Increase in muscular strength and general sense of well-being, (5) Decrease in sedimentation rate, (6) Some decrease in tumefaction, (7) Increase in life expectancy, (8) Histological changes, (9) Necrotic involution and (10) Intense local reaction in the primary and secondary lesions.

When information reached Mr. Krebs that preliminary results of the analysis of Laetrile being done at the A.M.A. chemical laboratory indicated that only amygdalin was present, he began a new round of correspondence to remind his group and the Commission that he had always said that the natural laetrile, or amygdalin, was part of the "remedy," and gave more emphasis to his previous statements that he did not maintain that laetrile was necessarily an effective treatment for cancer.

The financial background of the production and distribution of Laetrile has naturally been of some interest to investigators. Krebs maintains that the development of the agent has been extremely costly, while some of the physicians who have been using the material in private practice have maintained that their charges have been modest indeed. The Commission has a witnessed statement from a patient who visited one of these physicians to discuss treatment of his Hodgkin's disease with Laetrile. The patient's statement certifies that he was advised to try one week of treatment, during which three injections of Laetrile would be given at a cost of \$50.00 each. In addition, three injections of vitamins would also be given, presumably the so-called Vitamin B₁₅, also manufactured by Krebs, and the cost of this would be \$10 each time. Thus the trial period of one week's treatment would cost this patient, a young man with modest income, a total of \$180. One of the physicians using Laetrile has informed the Commission that it is supplied to him by Krebs at the cost of \$10 per ampule, and the Vitamin B₁₅ at a cost of \$3 per ampule.

* Dr. Greenstein writes in a letter dated November 10, 1952: "Such a statement as, 'the malignant cell... is virtually an island surrounded by a sea of beta-glucuronidase' is sheer nonsense."

In one instance of a patient with an operable gingival carcinoma under treatment with Laetrile, three requests were made for serial biopsies of the lesion while under treatment, as a pre-treatment biopsy was already in our possession. Repeated assurances were given us that biopsies would be obtained. We offered to assist in any way desired, but no material was received.

11. *Conclusions of the Commission.* Laetriles have been advocated for the treatment of cancer on the basis of the following claims:

(a) That one or more synthetic laetriles have been synthesized.

(b) That in the presence of the enzyme beta-glucuronidase, supposedly present in excess in cancer tissue, a chemical reaction occurs resulting in the liberation of nascent HCN.

(c) That the HCN thus produced has, at least to some extent, a selective cytotoxic effect on the cancer cell.

The evidence accumulated by the Cancer Commission and its consultants indicates the following defects in these claims, in the following order:

(a) Chemical analyses done independently for the Commission have identified in the product distributed as Laetrile only the presence of a natural laetrile termed amygdalin.

(b) The enzyme beta-glucuronidase, while present in some excess in some types of cancer, is also present in similar concentrations in normal tissue such as liver and spleen. In fact, the total amount of beta-glucuronidase present in normal tissues in almost any cancer patient considerably exceeds that which is present in neoplastic tissue.

(c) No satisfactory evidence has been produced to indicate any significant cytotoxic effect of Laetrile on the cancer cell.

The Commission has collected information concerning 44 patients treated with Laetrile, all of whom either have active disease or are dead of their disease, with one exception. Of those alive with disease, no patient has been found with objective evidence of control of cancer under treatment with Laetriles alone.

Nine patients dying from cancer after treatment with Laetrile have been autopsied, and histological studies done for the Commission by five different pathologists have shown no evidence of any chemotherapeutic effect.

In two independent studies by experienced research workers, Laetrile has been completely ineffective when used in large doses on cancer in laboratory animals, in lesions which are readily influenced by useful chemotherapy.

The American Cancer Society: What It Is; What It Does

THE AMERICAN CANCER SOCIETY, which will conduct its annual educational and fund raising crusade during the month of April, is the only voluntary agency operating throughout California with a program of cancer research, education and service. It receives no funds from the government fisc but is supported entirely by donations from the public.

The Cancer Society has official approval of the California Medical Association and of the county medical societies in the areas in which it is active. It has branches in 34 counties of California and informal county committee organizations in twelve others.

Members of the Cancer Commission of the California Medical Association automatically are elected to concurrent membership on the board of directors of the California division of the society. Members of County Medical Society cancer committees also serve automatically on the boards of directors of the various Cancer Society branches.

During the past year the society joined with the Cancer Commission in arranging 31 Cancer Conferences for the medical societies of counties remote from medical teaching centers. The society also gave financial assistance to 60 consultative tumor boards which were approved by the Cancer Commission.

In addition to providing speakers and films for professional meetings, the society sends *CA: A Bulletin of Cancer Progress* to 4,300 California physicians in general practice who have requested it. Each year it distributes at least one monograph, written by a recognized authority, without charge to all physicians in the state. Two were issued last year, covering the subjects of cancer of the esophagus and stomach and malignant lymphomas and leukemias.

The society's principal effort, however, is in the fields of cancer research and general public education. Its program of public education reaches an annual peak in April, which is proclaimed nationally as Cancer Control Month. During this period the society endeavors to impress upon millions of Americans the seven danger signals of cancer and the need for prompt recognition and treatment of the disease.

The funds it collects are used also to maintain a research program which is the backbone of the society's activities. Some of the most important phases of this research program are being carried out in the institutions of this state.

The society invites the cooperation of all physicians in its activities, not only during the period of the fund-raising drive but throughout the year. It particularly urges them to participate as speakers in its public education campaign.

Council Meeting Minutes

Tentative Draft: Minutes of the 397th and 398th Meetings of the Council of the California Medical Association.

397th Meeting

The meeting was called to order in the Golden Empire Room of the Hotel Mark Hopkins, San Francisco, at 12:15 p.m., Saturday, December 6, 1952, by Chairman Shipman.

Roll Call:

President were President Alesen, President-Elect Green, Speaker Charnock, Vice-Speaker Bailey, Secretary Daniels, Editor Wilbur and Councilors Shipman, West, Wheeler, Loos, Sampson, Morrison, Dau, Ray, Montgomery, Lum, Bostick, Pollock, Frees, Carey, Kirchner and Heron.

Absent for cause, Councilor Varden.

A quorum present and acting.

Present by invitation during all or a part of the meeting were Messrs. Hunton, Thomas, Clancy, Gillette and Pettis of C.M.A. staff, Legal Counsel Hassard, Mr. Ben Read of the Public Health League of California, Legislative Chairman Doctor Dwight H. Murray, county society executive secretaries Thompson of San Joaquin and Donovan of Santa Clara and Doctors E. Vincent Askey, Francis J. Cox, Sam McClendon, Samuel R. Sherman, Abraham Sirbu, Dan Kilroy, James C. Doyle, Henry Gibbons III, H. Gordon MacLean and Joseph S. McGuinness.

1. Minutes for Approval:

On motion duly made and seconded, minutes of the 396th meeting of the Council, held November 15-16, 1952, were approved.

2. Membership:

(a) On motion duly made and seconded, two delinquent members whose dues had been received, were voted reinstatement.

(b) On motion duly made and seconded, Doctor Cloyd N. McAllister of Madera County was elected to Associate Membership.

(c) On motion duly made and seconded, Doctor Kenneth J. Dunlavy of Sonoma County was elected to Retired Membership.

(d) On motion duly made and seconded in each instance, seven applicants were voted a reduction of dues because of protracted illness or postgraduate study.

(e) Report was made on the expulsion of one member from the Los Angeles County Medical Association following hearings on charges of unprofessional conduct.

3. Annual Session:

On motion duly made and seconded, approval was voted the President to invite Dean Manion of the School of Law, Notre Dame University, as the President's guest speaker at the 1953 Annual Session, it being understood that arrangements would be made to provide Dean Manion with a suitable separate meeting to which the public might be invited.

On motion duly made and seconded, it was voted to invite Doctor Leonard Scheelc, Surgeon General of the U. S. Public Health Service, to address the 1953 Annual Session on the occasion of his visit to Los Angeles on official business.

4. Professional Disability Insurance:

Councilor Kirchner reported on the study made by his committee of a group disability insurance program which had been offered the Association. After discussion, it was regularly moved, seconded and voted to approve the committee's report and to refer the subject to the Executive Committee for further study and report.

5. Committee on Industrial Accident Commission:

Doctor Francis J. Cox, chairman of the Committee on Industrial Accident Commission, gave a progress report on the committee's activities, including the filing of a petition to the Industrial Accident Commission for approval of a proposed new fee schedule. On motion duly made and seconded, it was voted to authorize the committee, working with the Committee on Public Policy and Legislation, to instigate legislation on the subject of authority of a state agency to inaugurate and enforce a schedule of medical and surgical fees, in the event a satisfactory reply on the current petition is not received by next January 1.

6. Referee for Disciplinary Case:

On motion duly made and seconded, it was voted to appoint a referee to conduct a hearing by the Riverside County Medical Association on charges of unprofessional conduct brought against one of its members.

Recess

At this point, 1:30 p.m., Saturday, December 6, 1952, the meeting was recessed until 12:00 noon, Sunday, December 7, 1952.

7. Special Committee on Psychiatry:

Dr. Alesen reported on a study made by a special committee on psychiatry on the report of research work performed in a state hospital. On motion duly made and seconded, it was voted to request this committee to make such further studies on this subject as might be indicated.

On motion duly made and seconded, it was voted

to appoint a committee on nutritional studies in state hospitals, subject to the consent and advice of Dr. Dwight L. Wilbur, who has conducted a nutritional study on this subject.

8. *Bureau of Mental Health:*

Councilor Carey reported on the opening of an office by the Bureau of Mental Health, Department of Mental Hygiene, in which a state psychiatrist offers psychiatric service to all patients, including some in whose cases there is a question as to the social servicing employed. On motion duly made and seconded, it was voted to advise the county societies on the action previously taken by the Council in regard to private practice by physicians employed in state institutions.

9. *California Medicine:*

Editor Wilbur discussed a proposal that CALIFORNIA MEDICINE be augmented by the addition of (1) increased reporting on Association activities and considerations and (2) editorials and reports on medical-economic subjects, social problems, legal matters, medical education and other subjects. He suggested that the President, President-elect, Council Chairman and Secretary sit with the Editor as an advisory board on the selection and form of such material. On motion duly made and seconded, it was voted to authorize the Editor to proceed along the lines outlined.

10. *Professional Liability Insurance:*

A letter from a county society, outlining its objections to the exclusion of specified risks from its professional liability policies, was read and discussed. It was regularly moved, seconded and voted to refer this matter to the Committee on Medical Defense.

11. *Public Policy and Legislation:*

Dr. Dwight H. Murray, legislative chairman, reported on a meeting held by his committee with the special Committee on Psychology and invited psychologists. Dr. Bullock's written report was distributed to each Councilor and considered. On motion duly made and seconded, it was voted to refer the matter of suggested legislation in the field of psychology to the Committee on Public Policy and Legislation for further consideration.

12. *Department of Public Health:*

A communication from Dr. Garnett Cheney on the subject of rabies control and milk pasteurization and certification was read. Dr. Cheney urged that the Association undertake joint action with the State Department of Public Health along the lines of more adequate public control of these matters and on motion duly made and seconded, it was voted to approve such joint action.

Adjournment:

There being no further business to come before it, the meeting was adjourned at 2:00 p.m., Sunday, December 7, 1952.

SIDNEY J. SHIPMAN, M.D., *Chairman*
ALBERT C. DANIELS, M.D., *Secretary*

398th Meeting

The meeting was called to order by Chairman Shipman in Room 220 of the St. Francis Hotel, San Francisco, at 9:30 a.m., Sunday, February 22, 1953.

Roll Call:

Present were President Alesen, President-elect Green, Speaker Charnock, Vice-Speaker Bailey, Councilors West, Wheeler, Loos, Sampson, Morrison, Dau, Ray, Lum, Bostick, Pollock, Frees, Carey, Shipman, Kirchner and Heron, Secretary Daniels and Editor Wilbur.

Absent for cause: Councilors Montgomery and Varden.

A quorum present and acting.

Present by invitation during all or a part of the meeting were Messrs. Hunton, Thomas, Clancy, Pettis and Gillette of C.M.A. staff; Legal Counsel Howard Hassard; Drs. Dwight H. Murray, Francis T. Hodges and Francis J. Cox; county society executive secretaries Waterson of Alameda-Contra Costa, Geisert of Kern, Nute of San Diego, Wood of San Mateo and Donovan of Santa Clara; Dr. Malcolm Merrill of the State Department of Public Health; Mr. Ben H. Read of the Public Health League of California; Mr. K. L. Hamman of California Physicians' Service; Dr. John S. O'Toole, secretary of the Riverside County Medical Association; Mr. Clem Whitaker, Jr., of public relations counsel, and Drs. John W. Cline and Edwin L. Bruck.

1. Minutes for Approval:

(a) On motion duly made and seconded, minutes of the 397th Council meeting, held December 6-7, 1952, were approved.

(b) On motion duly made and seconded, minutes of the 235th Executive Committee meeting, held December 20, 1952, were approved.

(c) On motion duly made and seconded, minutes of the 236th Executive Committee meeting, held February 1, 1953 were approved.

2. Membership:

(a) A report of membership as of February 20, 1953, was received.

(b) On motion duly made and seconded, five members delinquent for 1952 and one delinquent for 1951 and 1952 were voted reinstatement.

(c) On motion duly made and seconded in each

instance, four applicants were elected to Associate Membership. These were: Charles R. Gardipee, Alameda-Contra Costa; Arthur R. Jewel, Napa County; J. T. Shelton, and Robert S. Westphal, Sonoma County.

(d) On motion duly made and seconded in each instance, 17 applicants were elected to Retired Membership. These were: Harry Abrons, Wm. C. Pruett, Roscoe Van Nuys, Alameda-Contra Costa; A. H. Konigmacher, R. J. van Wagenen, Fresno County; R. Elsie Arburthnot, George W. Blatherwick, A. Newton Bobbitt, C. F. Charlton, Ralph C. Christie, Wm. L. Goeckerman, John P. Naughton, Wendy Stewart, C. G. Sutherlin, Cleon W. Symonds, Los Angeles County; George E. Chapman, San Francisco County; and George A. Broughton, Ventura County.

(e) On motion duly made and seconded in each instance, 26 applicants were voted leaves of absence.

(f) On motion duly made and seconded in each instance, three applicants were voted reductions of dues.

(g) On motion duly made and seconded, it was voted to authorize the central office to handle administratively the applications for leaves of absence or reduction of dues for members over the age of 70 years or those in their first three years of practice, subject to Council approval.

(h) On motion duly made and seconded, it was voted to appoint a referee to conduct a disciplinary hearing in Los Angeles County.

(i) On motion duly made and seconded, it was voted to hear an appeal from a Los Angeles County disciplinary case at 10 a.m., Saturday, May 23, 1953, in Los Angeles, with written briefs to be filed in advance by both parties and with Dr. L. A. Alesen appointed a conciliation committee of one to attempt a conciliation in this matter.

3. *Financial:*

A report of bank balances as of February 20, 1953, was received and ordered filed.

4. *Alternate Delegate to American Medical Association:*

In accordance with the terms of Chapter VIII, Section 9, of the By-Laws, and on motion duly made and seconded, Dr. Orris R. Myers of Eureka was elected an Alternate Delegate to the American Medical Association, as alternate to Delegate John W. Green.

5. *Nominations for C.P.S. Board of Trustees:*

On motion duly made and seconded, the following nominations for the Board of Trustees of California Physicians' Service were approved: Merlin L. Newkirk, M.D., to succeed Donald Cass, M.D.; Leon O.

Desinone, M.D., to succeed Kendrick A. Smith, M.D.; Francis T. Hodges, M.D., to succeed himself; Mr. Robert A. Hornby to succeed himself; Edwin L. Bruck, M.D., for the vacancy created by the resignation of Harold M. F. Behnemann, M.D.

6. *Advisory Planning Committee:*

Mr. Hunton reported on the meeting of the Advisory Planning Committee held February 20, 1953, and recommended that Eldon E. Geisert, newly appointed executive secretary of the Kern County Medical Society, be appointed a member of the committee. On motion duly made and seconded, this appointment was voted. Mr. Hunton also presented the following resolution, which, on motion duly made and seconded, was unanimously adopted:

WHEREAS, In the March, 1953, issue of the *Reader's Digest*, in an article entitled, "The Modern Man of Medicine," much favorable publicity is given to the Alameda-Contra Costa Medical Association's progressive public relations program; and

WHEREAS, The entire membership of the California Medical Association basks in the honor bestowed upon this Association; and

WHEREAS, Much credit for this extremely favorable article, as well as the philosophy and program which it describes, should go to Rollen A. Waterson, executive secretary of the Alameda-Contra Costa Medical Association; now, therefore, be it

Resolved: That on this 22nd day of February, 1953, the Council of the California Medical Association extend to the Alameda-Contra Costa Medical Association, and its executive secretary, Rollen Waterson, its congratulations and best wishes.

7. *California Physicians' Service:*

Dr. Francis T. Hodges reported on the beneficiary and physician membership of California Physicians' Service and gave a progress report on the activation by the C.P.S. Board of Trustees of recommendations adopted by the 1952 House of Delegates.

8. *Blue Shield-Blue Cross Meetings:*

On motion duly made and seconded, it was voted that it be the sense of the Council that the chair appoint a committee to explore all aspects of Blue Shield and Blue Cross operations in southern California, with a view toward possible joint operations by the two organizations.

It was further moved, seconded and voted that President Alesen be authorized to arrange a joint meeting of representatives of the two organizations.

(Chairman Shipman appointed Dr. Alesen as chairman of the committee, with Dr. Ben Frees and Mr. Ritz Heerman as the other members.)

9. *Public Policy and Legislation:*

Dr. Dwight H. Murray reported on meetings held

in Washington between officials of the American Medical Association and Mrs. Oveta Culp Hobby, Federal Security Administrator, and President Eisenhower.

Mr. Read and Mr. Hassard reported on several legislative items under consideration by the Committee on Public Policy and Legislation. The committee pointed out that (1) legislation has been introduced to permit telephoned prescriptions for codeine and codeine mixtures, and (2) that such telephoned prescriptions be taken subject to later issuance of a written prescription.

On motion duly made and seconded, it was voted to recommend that telephoned prescriptions for dangerous drugs be recognized, subject to furnishing of a written prescription within 72 hours.

On motion duly made and seconded, it was voted to oppose current legislative proposals calling for the State of California to enter the disability insurance field in competition with private industry.

10. *Committee on Industrial Accident Commission:*

Dr. Francis J. Cox reported on the status of his committee's negotiations for an adequate fee schedule for industrial accident cases. Legislation has been introduced to clarify the legal position in establishment of such a schedule.

11. *State Department of Public Health:*

Dr. Malcolm Merrill, Assistant Director of Public Health, reported that about 1,000,000 doses of gamma globulin would probably be available for the nation during the polio season and that all available serum has been withdrawn from the commercial market and placed in a national pool. The State Department of Public Health is working with the Association, the California Conference of Local Health Officers and several technical consultants on the problems of distribution of the small amount of serum which will become available.

On motion duly made and seconded, it was voted to prepare a news release, in conjunction with the State Department of Public Health, on the impending shortage of gamma globulin.

On motion duly made and seconded, it was unanimously voted to express to Dr. Wilton L. Halverson, State Director of Public Health, the approval of the Council of his services in his official capacity and the sincere hope that he will remain in California to continue his good work.

Councilor Carey and Dr. Henry Eagle, secretary of the Shasta County Medical Society, discussed the psychiatric services offered in some rural areas by the State Department of Mental Hygiene. On motion duly made and seconded, it was voted to refer this matter to the Committee on Public Health and Public Agencies.

12. *Public Relations:*

Dr. Pollock and Messrs. Hassard and Gillette reviewed some staff questions which have arisen in hospital districts in various places. The public relations department has been asked to assist in some phases of this problem.

Discussion was held on plans now being made in the San Francisco bay area for establishment of an educational television station. It was pointed out that public service time will likely be made available by some of the existing television outlets in this and other areas of the state.

13. *Group Disability Insurance:*

Councilor Kirchner reported that the group disability insurance program offered for members of the Association was to be reviewed by an independent insurance analyst. He also discussed the health insurance needs of medical students and their dependents.

Councilor Wheeler reported that the Riverside County Medical Society and C.P.S. were cooperating in setting up a prepayment medical care program for the University of California at Riverside.

On motion duly made and seconded, it was voted to request the C.P.S. Board of Trustees to investigate the possibility of providing medical services for students throughout the state.

14. *Committee on Scientific Work:*

Secretary Daniels presented a list of guest speakers and non-members who will contribute papers at the 1953 Annual Session. On motion duly made and seconded, this list was approved.

15. *State Bar of California:*

A request was presented from the State Bar of California for appointment of a committee to work with a similar committee from the State Bar on a new legal definition of insanity. On motion duly made and seconded, the chairman was authorized to appoint such a committee.

16. *1952 House of Delegates:*

Discussion was held on a resolution presented to the 1952 House of Delegates, calling for the establishment of the Department of Public Relations as a separate organization from the Association office. This resolution was defeated in the House of Delegates but referred to the Council for consideration. On motion duly made and seconded, it was voted to continue the Department of Public Relations in its present state.

17. *Medical Student Training:*

Dr. Charnock reported on work being done by Jerry Pettis of public relations staff in indoctrinating medical students. On motion duly made and seconded,

onded, it was voted to encourage this activity and to furnish reasonable financing for it.

18. *School of Health Programs:*

Discussion was held on the proposal that the Association foster the establishment of organized school health programs in the various areas of the state. On motion duly made and seconded, it was voted to empower Dr. D. H. Murray to discuss this proposal with the school health authorities in the American Medical Association.

Adjournment:

The Chairman called attention to the fact that the Council's business now requires either one long day or two days to complete. He suggested that in future meetings Councilors who must travel plan to return by late planes or trains or be prepared to spend two days in session.

There being no further business to come before it, the meeting was adjourned at 6:10 p.m.

SIDNEY J. SHIPMAN, M.D., *Chairman*

ALBERT C. DANIELS, M.D., *Secretary*

--- In Memoriam ---

ADAMS, BON O. Died in Riverside, February 23, 1953, aged 80, of arteriosclerotic heart disease. Graduate of the Medical College of Indiana, Indianapolis, 1901. Licensed in California in 1916. Doctor Adams was a member of the Riverside County Medical Association, the California Medical Association, and the American Medical Association.



BAILEY, CORNELIUS O. Died in Los Angeles, February 1, 1953, aged 65, of cardiac failure. Graduate of the University of Texas School of Medicine, Galveston, 1915. Licensed in California in 1931. Doctor Bailey was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



BOLIN, ZERA E. Died in San Francisco, February 11, 1953, aged 64. Graduate of Jefferson Medical College of Philadelphia, Pennsylvania, 1914. Licensed in California in 1923. Doctor Bolin was a member of the San Francisco Medical Society, the California Medical Association, and the American Medical Association.



CLOUGH, DAVID M. Died January 22, 1953, aged 44, when an airplane he was piloting crashed into a mountain side near Round Mountain, California. Graduate of the University of Minnesota Medical School, Minneapolis, 1942. Licensed in California in 1942. Doctor Clough was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



CLOUGH, FRANCIS E. Died in Laguna Beach, February 9, 1953, aged 74, of coronary artery disease. Graduate of Rush Medical College, Chicago, Illinois, 1902. Licensed in California in 1928. Doctor Clough was a member of the San Bernardino County Medical Society, the California Medical Association, and the American Medical Association.



ELLWOOD, WALTER M. Died in Hollywood, February 7, 1953, aged 46, of coronary artery disease. Graduate of Marquette University School of Medicine, Milwaukee, Wisconsin, 1931. Licensed in California in 1944. Doctor Ellwood was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

ciation, the California Medical Association, and the American Medical Association.



GIRARD, FRANK R. Died in Tucson, Arizona, February 28, 1953, aged 72, from injuries received in a fall from a horse at a guest ranch near the Arizona city. Graduate of the University of California Medical School, Berkeley-San Francisco, 1903. Licensed in California in 1914. Doctor Girard was a retired member of San Francisco Medical Society, the California Medical Association, and an associate member of the American Medical Association.



HONAKER, GEORGE T. Died in San Leandro, February 22, 1953, aged 75. Graduate of Barnes Medical College of St. Louis, Missouri, 1900. Licensed in California in 1920. Doctor Honaker was a retired member of the Alameda-Contra Costa Medical Association, and the California Medical Association, and an associate member of the American Medical Association.



ROSSON, CHARLES T., JR. Died in Hanford, February 3, 1953, aged 47. Graduate of the University of California Medical School, Berkeley-San Francisco, 1931. Licensed in California in 1931. Doctor Rosson was a member of the Kings County Medical Society, the California Medical Association, and the American Medical Association.



TAYLOR, ROY N. Died December 20, 1952, aged 56. Graduate of the University of Tennessee College of Medicine, Memphis, 1924. Licensed in California in 1925. Doctor Taylor was a member of the Riverside County Medical Association, and an associate member of the California Medical Association, and the American Medical Association.



WEBER, WILLIAM L. Died in Durham, North Carolina, January 30, 1953, aged 67, of cardiovascular disease. Graduate of the University of Southern California School of Medicine, Los Angeles, 1908. Licensed in California in 1908. Doctor Weber was a retired member of the Los Angeles County Medical Association, the California Medical Association, and an associate member of the American Medical Association.

NEWS & NOTES

NATIONAL • STATE • COUNTY

LOS ANGELES

Dr. Norman Q. Brill has been selected to head a co-ordinated mental hygiene program by the University of California at Los Angeles School of Medicine and the State Department of Mental Hygiene, it has been announced by Chancellor Raymond B. Allen of U.C.L.A.

Dr. Brill will serve both as chairman of the department of psychiatry at the new Medical Center and as director of a State Department Mental Hygiene Unit to be built near the Los Angeles campus.

* * * *

The annual meeting of the **National Tuberculosis Association** will be held in Los Angeles May 18-22, Dr. Joseph L. Robinson, president of the Los Angeles County Tuberculosis and Health Association, announced recently. This will be the first time in 15 years the organization has held its annual session in Los Angeles. The meeting closes only two days before the opening of the Annual Session of the California Medical Association, also to be held in Los Angeles.

Scheduled in conjunction with annual sessions of the American Trudeau Society and the National Conference of Tuberculosis Workers, the 49th national meeting of the Tuberculosis Association will have headquarters at the Statler and Biltmore hotels.

The **California Tuberculosis and Health Association** will conduct its annual meeting May 18 at 7 p.m. in the Statler Hotel.

"In addition to medical, nursing, program development and general sessions, an unusual program of entertainment has been planned," Dr. Robinson said.

SAN FRANCISCO

Two of the four lectures in the 71st course of **Popular Medical Lectures** sponsored by the Stanford University School of Medicine remain to be given. One is "Rehabilitation of the Polio Patient" by William H. Northway, M.D., which is scheduled for Friday, April 17, at 1:30 p.m. in Lane Hall; the other, "Sleep and Sleeping Pills," by Windsor C. Cutting, M.D., will be given April 27 at 1:30 in Lane Hall.

The first two lectures in the series were "Influenza: Past and Present" by Ernest Jawetz, M.D., and "How to Let Children Grow Up" by John A. Anderson, M.D.

* * * *

Dr. Robert Wartenberg, clinical professor of neurology, University of California Hospital, has been elected a corresponding member of the Rio de Janeiro Society of Neurology.

GENERAL

A luncheon for members of the faculty and alumni of the **University of California School of Medicine** will be held Monday, May 25, in the foyer of the Biltmore Bowl,

Biltmore Hotel, Los Angeles. The date coincides with the first day of scientific sessions of the annual meeting of the California Medical Association, also to be held at the Biltmore.

Reservations for the luncheon may be obtained by writing to John M. Fernald, M.D., 3875 Wilshire Boulevard, Los Angeles 5.

* * * *

The program for the annual meeting of the **Pacific Coast Oto-Ophthalmological Society**, to be held May 24-May 28 in the Ambassador Hotel, Los Angeles, follows:

SUNDAY, MAY 24

9:00-5:00 p.m.—Registration.

5:00 p.m.—President's Reception.

MONDAY, MAY 25

9:00 a.m.—Presidential Address: Clifford Allen Dickey, M.D.

9:30 a.m.—Address by Guest Speaker for Otolaryngology: William James McNally, M.D., Montreal, Canada.

10:30 a.m.—Introduction to Guest of Honor (Eulogy to LeRoy Rich Pugmire, M.D., Ogden, Utah).

Business Meeting.

11:00 a.m.—Address by Guest Speaker for Ophthalmology: Olson E. Braley, M.D., Iowa City, Iowa.

TUESDAY, MAY 26

8:30 a.m.—Movie: Serous Otitis—H. B. Perlman, M.D., Chicago.

9:00 a.m.—Hereditary Hemorrhagic Telangiectasia — David A. Dolowitz, M.D., Salt Lake City.

9:30 a.m.—Laryngeal Stenosis — Marvin W. Simmons, M.D., Fresno.

10:00 a.m.—The Electro-Audiogram—Experiences with Objective Skin Resistance Audiometry—Victory Goodhill, M.D.; Seymour J. Brockman, M.D.; and Irving Rehman, Ph.D., Los Angeles.

10:30 a.m.—Round Table.

11:30 a.m.—Movie: An Otologic Seminar—H. G. Kobrak, M.D., Chicago.

WEDNESDAY, MAY 27

8:30 a.m.-5:00 p.m.—Instruction Courses.

THURSDAY, MAY 28

8:30 a.m.—Movie: Bronchography — James A. Harrill, M.D., Winston-Salem, N. C.

Discussion by Mervin C. Myerson, M.D., Beverly Hills.

9:00 a.m.—Changing Aspects of Bronchoesophagology—Thomas E. Douglas, Jr., M.D., Seattle, Wash.

9:30 a.m.—Modern Management of Facial Nerve Pathology—Merrill C. O'Donnell, M.D., Santa Monica.

10:00 a.m.—Transverse Incision in Pharyngeal Pulsion Diverticula—S. L. Perzik, M.D., Beverly Hills.

10:30 a.m.—Rhinoplastic Treatment of Recent Nasal Fractures—Lewis W. Jordan, M.D., Portland, Oregon.

11:00 a.m.—Clinico-Pathologic Studies of Obstruction of the Tear Passages—Richard Waldapfel, M.D., and Geno Saccomanno, M.D., Grand Junction, Colorado.

11:30 a.m.—Movie: Cardiac Arrest—Robert M. Hosler, M.D., Cleveland, Ohio.

* * * *

A 16-man advisory committee has been named to assist the California State Department of Public Health in developing a plan for the **distribution in California of gamma globulin** for the prevention of infantile paralysis. Dr. Wilton L. Halverson, state director of public health, said the advisory committee would meet as soon as it is known from the Office of Defense Mobilization the amount of gamma globulin California will receive and its policy for distribution. The Office of Defense Mobilization has the job of allocating the nation's current supply of gamma globulin to the 48 states.

The advisory committee has membership from the Cali-

fornia Medical Association, the California Osteopathic Association, the California Conference of Local Health Officers and other organizations and technical consultants, as follows:

Dr. Francis West, San Diego; Dr. H. Clifford Loos, Los Angeles, and Dr. Hollis Carey, Gridley, represent the Public Health Committee of the California Medical Association.

Dr. J. Gordon Epperson, Oakland, represents the California Osteopathic Association.

Dr. Roy O. Gilbert, Los Angeles County Health Officer; Dr. Henrik L. Blum, Contra Costa County Health Officer, and Dr. W. Elwyn Turner, Santa Clara County Health Officer, represent the California Conference of Local Health Officers.

Technical experts on the committee include Dr. Karl F. Meyer, director of the George William Hooper Foundation Medical Center, San Francisco; Dr. E. B. Shaw, of Children's Hospital, San Francisco; Dr. Walter Ward, associated with one of the laboratories which fractionates gamma globulin from whole blood, Berkeley, and Dr. A. G. Bower, Los Angeles County General Hospital.

Four members of the State Board of Health, Dr. Charles E. Smith, Berkeley; Dr. Samuel J. McClendon, San Diego; Dr. James R. Rinehart, San Francisco; and Dr. Harry E. Henderson, Santa Barbara, will also serve with the committee.

Dr. William P. Shepard, San Francisco, a member of the Health Resources Advisory Committee of the Office of Defense Mobilization, the branch of the ODM which is assigned the task of distributing gamma globulin, will meet with the California advisory committee.

* * * *

The 23rd annual meeting of the **Aero Medical Association** will be held at the Biltmore Hotel, Los Angeles, May 11, 12 and 13, 1953. Further information may be obtained from the secretary of the association, Thomas H. Sutherland, M.D., P.O. Box 26, Marion, Ohio.

* * * *

Attending the eighth **National Conference on Rural Health** held recently in Roanoke, Virginia, were Dr. Henry A. Randel of Fresno, chairman of the California Medical Association Committee on Rural Health, Dr. John Dement of Berkeley, chief of local health services of the California State Department of Public Health, Dr. J. Frank Doughty of Tracy, member of the A.M.A. Rural Health Committee, and Mrs. Ralph Eusden, president of the Woman's Auxiliary to the A.M.A.

* * * *

Women engaged in scientific research work in California will have an opportunity to win an award amounting to \$1500 or more, it was announced today by Kappa Kappa Gamma sorority and the California Institute for Cancer Research.

Known as the Kappa Kappa Gamma Cancer Research Award, the newly created honor was established in memory of Mrs. Marion Howell Tompkins, a member of the sorority, it was stated by Louis H. Seagrave, chairman of the board of the Institute, and Mrs. E. Granville Crabtree, president of the sorority.

The award will be made for outstanding achievement in the field of cancer research, such as an important discovery or process, reported in the form of a scientific paper. A panel of three judges will determine the winning entry. Deadline for entries is July 1, 1953 and announcement of the award-winning paper will be made on September 30, 1953. Further information may be obtained from the California Institute for Cancer Research, 612 Flower Street, Los Angeles.

POSTGRADUATE EDUCATION NOTICES

MEDICAL EXTENSION UNIVERSITY OF CALIFORNIA

Postgraduate Courses for 1953

Pediatric Conference, June 22 through 26. Fee to be announced. Medical Center.

Conference on General Surgery, June 15 through 19. Fee \$75.00. Medical Center.

Obstetrical and Gynecological Conference, September 2, 3, 4. Place and fee to be announced.

Ophthalmology (for specialists), September 14 through 19. Fee \$75.00. Medical Center.

Medicine for General Practitioners, September through November. East Oakland Hospital. Fee \$50.00.

Evening Lectures in Medicine, September through November. Fee \$50.00. Mills Memorial Hospital, San Mateo (probably).

Contact: All inquiries to be addressed to Stacy R. Mettier, M.D., Professor of Medicine, Head of Postgraduate Instruction, Medical Extension, University of California Medical Center, San Francisco 22.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Cardiology—Date: June 15-19. Fee: \$75.00.

General Medicine—Date: June 15-19. Fee: \$75.00.

Surgery of Trauma—Date: June 22-26. Fee: \$75.00.

General Surgery—Date: June 22-26. Fee: \$75.00.

Programs and further information may be obtained from the Office of the Dean, Stanford University School of Medicine, 2398 Sacramento Street, San Francisco 15, California.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES MEDICAL EXTENSION in cooperation with SCHOOL OF MEDICINE

Proctology Symposium—

Date: Thursday, April 16 (all day)—UCLA Campus.
Fee: \$17.50.

Guest Speaker: J. Peerman Nesselrod, M.D., Chicago, Illinois.

Peripheral Vascular Diseases—

Date: Friday, April 17 (all day)—UCLA Campus.
Fee: \$17.50.

Dermatology in General Practice—

Date: Wednesday afternoons, April 22 to May 27—UCLA Campus.
Fee: \$30.00.

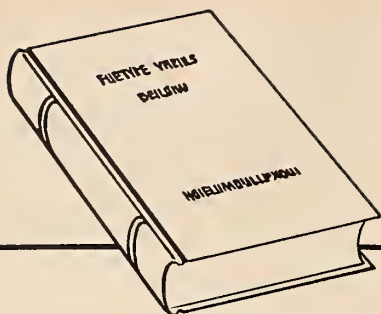
Techniques of Hypnosis—

Date: Friday evening and Saturday morning, May 8 to May 30—San Diego.
Fee: \$100.00.

Laboratory Technicians' Symposium—

Date: June 20 and 21 (all day)—UCLA Campus.
Fee: \$15.00.

Contact: Dr. Thomas H. Sternberg, Head of Postgraduate Instruction, Medical Extension, University of California, Los Angeles 24.



THE PHYSICIAN'S *Bookshelf*

MEDICAL LICENSURE EXAMINATIONS (Rypins')—Topical Summaries and Questions—7th Edition. Edited by Walter L. Bierring, M.D., F.A.C.P. J. B. Lippincott Company, Philadelphia, 1952. 856 pages, \$8.00.

The seventh edition presents a compact and orderly review of 13 major medical subjects together with actual questions based on essential facts contained in the review of each subject.

This book, originally written by the late Harold Rypins, M.D., and revised three times by him, has been revised and brought up to date by a panel of medical teachers in a fifth, a sixth and now a seventh edition.

The table of contents is divided into two parts: Part One, Basic Medical Sciences, and Part Two, the Clinical Sciences.

In this latest revision, the title of the chapter on chemistry has been changed to "Biochemistry," and the chapter completely rewritten by a new author, Howard W. Robinson, M.D., Temple University School of Medicine. He has added more on carbohydrates, proteins and fats and their metabolism and has also included up-to-date information on the composition of individual body tissues, the chemistry of respiration, digestion, etc. There is a good new section on vitamins. A section on toxicology appearing in previous editions has been omitted.

There has been little change in the chapter on bacteriology except for a change of its title to "Microbiology" and the addition of a few new paragraphs on homologous serum jaundice, on coccidioidomycosis, and on histoplasmosis.

The chapter on hygiene and preventive medicine is now entitled "Preventive Medicine and Public Health" and written by the new authors Ernest L. Stebbins, M.D., and John C. Hume, M.D., Johns Hopkins School of Hygiene and Public Health. It is a well-organized outline of the subject in which all aspects of the field of public health are briefly and expertly reviewed.

Slightly revised discussions of the skin and of liver function and the added mention of antihormones, ACTH and the adrenals are included in the chapter on physiology.

Under the heading of pathology is to be found new information in outline form on virus pneumonia, collagen diseases, congenital heart disease, aneurysms and a few rare types of tumors.

The chapter on pharmacology has added newer knowledge on antibiotics, antihistamine compounds, chemotherapy, antimycotic agents, radioactive compounds, hormones, vitamins, autonomic drugs, etc.

The chapters on medicine and on surgery are very sketchy, but provide a good outline for the basis of study.

The chapter on psychiatry begins with a glossary of psychiatric terms that is very helpful to the student and then gives a short synopsis on the history, etiology and methods of therapy in psychiatry.

The publication contains considerable more material than the previous edition, but it has a good general index and

subjects are easy to find. The editor is careful to avoid repetition and overlapping of subjects. There has been a deliberate omission of nearly all technical procedures.

This book is intended to assist both student and examiners. It affords an excellent basis for review of the subjects covered and therefore serves this purpose well.

The subject matter in most instances is well outlined with attention being paid to modern developments and concepts in medical knowledge. Actual questions based on the essential facts contained in each chapter serve the interests of the student by stimulating thought processes. The questions can also be of some assistance to the examiner in determining the type and scope of questions used in examinations.

This book will continue to occupy a useful place on every medical library shelf and has a definite value in preparation for all examinations in medicine. The student must understand its limitations, however. The fundamentals are given, but it is left to the student to supplement his review with the latest ever-changing current thinking and with some of the finer details in diagnosis and treatment.

* * *

OPHTHALMIC PATHOLOGY—An Atlas and Textbook. Jonas S. Friedenwald, Helenor Campbell Wilder, A. Edward Maumenee, T. E. Sanders, John E. L. Keyes, Michael J. Hogan, W. C. and Ella U. Owens, with the editorial assistance of Helen Knight Steward. Published under the joint sponsorship of the American Academy of Ophthalmology and Otolaryngology and the Armed Forces Institute of Pathology. W. B. Saunders Company, Philadelphia, 1952. 489 pages, with 260 plates, \$18.00.

As stated on the title page, the book was written by a group of leading American eye pathologists and was sponsored by the American Academy of Ophthalmology and Otolaryngology and the Armed Forces Institute of Pathology. The book is divided into 18 chapters dealing with anatomic and physiologic considerations: Histology; growth and aging; nature and mechanism of inflammation; endophthalmitis; granulomatous inflammations; injuries; extrabulbar diseases; diseases of conjunctiva and cornea; diseases of the lens; intraocular fluid circulation, glaucoma and hypotony; diseases of the ocular blood vessels; retina, disc and optic nerve; congenital and developmental anomalies; prenatal and neonatal diseases; hereditary and degenerative diseases, and tumors.

A successful attempt is made, where the present status of progress permits, to correlate morphological pathology with the physiological and biochemical pathology. Antiquated and frequently confused terms are clearly defined and classified into modern terminology. The text of each chapter is followed by an adequate reference list and the index is comprehensive.

The illustrations at the end of each chapter are all excellent photomicrographs, well labeled and beautifully printed, and will be of exceptional value especially to those without

access to a large eye pathology collection. One criticism that has been made is that the illustrations are not tied into the text. If this had been done it is obvious that the book could not be sold for its present sale price, which incidentally is very reasonable for such a book.

As this is a first edition there are occasional errors of fact which will undoubtedly be corrected in future editions.

The format is excellent; the paper good, the printing easily legible and, as already stated, the illustrations are beautifully printed.

The aim of the committee was "to provide a text embodying the requirements in histopathology for Board certification, to further instruction of residents in hospitals with limited teaching and laboratory facilities, and to furnish a convenient course for the ophthalmologist pursuing study in the pathology of his specialty." However, the volume must be considered not a substitute for the actual study of microscopic slides but an important adjunct to the study of the slides.

The book succeeds admirably in its aim and is recommended without reservation.

* * *

PROGRESS IN FUNDAMENTAL MEDICINE. Edited by J. F. A. McManus, M.D., University of Virginia, with ten outstanding contributors. Lea & Febiger, Philadelphia, 1952. 316 pages, 74 illustrations and 2 plates in color, \$9.00.

This volume consists of a series of essays on "topics of current clinical and pathologic importance." The subjects were chosen, according to the editor, "because information is being added about them" and were gathered together in a volume because of the view that newer material as published in scientific journals or in textbooks "may fail to reach the attention of some doctors." This point of view is not shared by the present reviewer.

The volume is physically attractive and the discussions, written by contributors to the field in each case, are generally good. That on pathology of systemic lupus erythematosus by Klemperer is outstanding. Other subjects concern protein hydrolysates and other aspects of parenteral nutrition (Cannon), the liver (G. K. and T. B. Mallory), coronary artery disease (Paterson), non-silica pneumoconioses (Wyatt), melanotic tumors of the skin (Cunningham), carcinoma in situ of the cervix uteri (Stoddard and Cuyler), the diagnosis of fungus infections with particular reference to staining methods (Kligman), and a survey of techniques for the histochemical approach to pathology (McManus). The discussions emphasize pathological aspects but include clinical ones as well. Each offers a list of references. There is a general index.

* * *

DISEASES OF THE SKIN—A Manual for Students and Practitioners. First compiled by the late Robert W. MacKenna, M.A., M.D., Ch.B. (Edin.). Fifth Edition compiled by Robert M. B. MacKenna, M.A., M.D. (Camb.), F.R.C.P. (Lond.), Physician-in-Charge of the Dermatological Department and Lecturer in Dermatology, St. Bartholomew's Hospital and Medical College, London. Distributed by Williams and Wilkins Co., Baltimore, 1952. 611 pages, \$8.00.

The fifth edition of this time-honored British text has been brought thoroughly up to date. It is well illustrated with numerous black-and-white and colored photographs of excellent quality. It can be highly recommended. However, one of the standard American texts would probably be preferable for undergraduate students in the United States schools.

The dosage of superficial x-ray therapy recommended for certain benign conditions (for example, flat warts of the face and hemangiomas) would be considered dangerously high by most American dermatologists.

The omission of a bibliography makes the book less valuable as a reference.

KITCHEN STRATEGY—The Family Angle on Nutrition. Leona M. Bayer, M.D., Assistant Clinical Professor of Medicine, Stanford University School of Medicine; and Edith Green, Television Cooking Expert, San Francisco. Charles C. Thomas, Publisher, Springfield, 1952. 94 pages, \$3.75.

The authors have assembled basic and pertinent information on nutrition and have oriented it in a practical fashion for the homemaker upon whom the success of a therapeutic dietary prescription rests. There is much useful information for those who are interested in feeding a family intelligently, well, and economically, and at the same time meeting the prescriptive requirements of a sick member of the family. The information is interestingly presented and is easy to comprehend. The menus for the common illnesses are simple and helpful, and should be welcome not only to the homemaker but also to the physician. It is the mutual understanding between these two which insures the proper care for the patient who must adhere to a nutritional dietary program.

The table of menu planning in which the simple food for the child is altered in a more palatable form for the more sophisticated members of the family is full of helpful suggestions. The last half of the book is devoted to recipes and suggestions designed to add interest to the dietary routine of menus.

This book could be recommended to housewives, since it brings together much information, which although available perhaps elsewhere, here carries the authority of a physician.

* * *

SURGERY OF THE EYE—Third Revised Edition. Meyer Wiener, M.D., Emeritus Professor of Clinical Ophthalmology, Washington University School of Medicine; and Harold G. Scheie, M.D., D.Sc., F.A.C.S., Associate Professor of Ophthalmology, the Medical School and Hospital, and Assistant Professor of Ophthalmology, Graduate School of Medicine, University of Pennsylvania. Grune and Stratton, New York, 1952. 449 pages, \$15.00.

This book is a revised third edition of 449 pages and 15 chapters. The preface describes the changes in the book. The book is very readable and has good illustrations. The chapter on basic techniques in ophthalmic surgery is very good. The chapter on cataract surgery outlining the various types of sections, closures and extraction techniques is exceptionally good. The chapter on glaucoma upon which Dr. Scheie has done outstanding work is very thorough, clear cut and specific.

This book is a good supplement to our present books on surgery.

* * *

THE JOURNAL OF THE AMERICAN GERIATRICS SOCIETY. Published monthly by the Williams & Wilkins Company, Baltimore, Md. \$10.00 per year.

In January 1953 appeared Volume 1, Number 1 of the *Journal of the American Geriatrics Society*. Willard O. Thompson, M.D., the editor, feels that the problems of our steadily enlarging aged population justify the establishing of another publication in the new specialty of geriatrics. The founder and secretary of the society, Malford W. Thewlis, M.D., suggests that we come within the scope of the geriatrician at 40, an age these days scarcely on the horizon of middle age. It is the intention of the editor to present clinical studies of geriatric problems, and the first issue contains excellent articles on some disorders of the aged in the fields of medicine, surgery, urology, gynecology, radiology, otorhinolaryngology and psychiatry. There is a section of abstracts of current geriatric literature. Aside from considerations as to whether or not this new journal fills a need, the format is attractive and the material nicely arranged and presented.

Hotel Reservation

FOR C.M.A. ANNUAL SESSION

IF YOU HAVE NOT already notified the C.M.A. office of the hotel accommodations you would like to have for the Annual Session, May 24 through 28, won't you order your reservation now? Just complete the form below and send it to the main office, 450 Sutter Street, San Francisco, at the earliest possible date—not later than May 1, please. A hotel assignment notice will be sent to you upon receipt of the completed form.

	Single	Double	Twin Beds	Triple	Suites
BILTMORE HOTEL	\$5.50	\$8.50	\$9.00	\$2.50	\$17-20
515 S. Olive	11.50	14.00	14.00	per person extra	22-25 26-33
GAYLORD HOTEL	7.00	9.50	9.50	10.00	13.50
3355 Wilshire	and up	and up	and up	and up	and up
MAYFLOWER HOTEL	5.25	5.25	5.75	7.75	14.00
535 S. Grand Ave.	8.00	8.00	9.00		
TOWN HOUSE	9-15	12-18	12-18	3.00	22.00
639 Commonwealth				per person extra	and up
ALEXANDRIA HOTEL	4.00	6.00	7.00	2.00	12.50-25
210 West Fifth St.	8.00	9.00	10.50	per person extra	

Please fill out and return this blank not later than May 1

CALIFORNIA MEDICAL ASSOCIATION
450 Sutter Street — Room 2000
San Francisco 8, California

Gentlemen:

Please make hotel reservations for me at the.....Hotel
in Los Angeles (second choice:.....) for the period of the C.M.A. Annual Session,
as follows:

Single Room \$.....Double Room \$.....Twin-Bed Room \$.....
Parlor (large/small) Suite \$.....Adjoining Twin-Bed Rooms, No..... \$.....
Number in party is....., consisting of self and.....
Will arrive (date).....A.M. or.....P.M.
Will depart (date).....A.M. or.....P.M.

PRINT NAME PLEASE

NAME.....
ADDRESS.....
CITY.....COUNTY.....

CALIFORNIA MEDICAL ASSOCIATION

82nd Annual Session



Los Angeles, May 24-28, 1953

Scientific Sessions

Meetings of the House of Delegates



LEWIS A. ALESEN
President



JOHN W. GREEN
President-Elect

PROGRAM AND PRE-CONVENTION REPORTS

for the

CALIFORNIA MEDICAL ASSOCIATION

Eighty-Second Annual Session

Los Angeles, May 24-28, 1953

Biltmore Hotel



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PRE-CONVENTION REPORTS

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Cancer Commission Pre-Convention Conferences, Page 340

C. M. A. Cancer Commission Pre-Convention Conference

LOS ANGELES—SATURDAY, MAY 23

Radiology

Conference Room 1, Biltmore Hotel

Chairman.....Joseph F. Linsman, M.D., Los Angeles

Secretary.....Charles E. Duisenberg, M.D., Palo Alto

DIAGNOSTIC SESSION—9:30 a.m. to Noon

1. Bone LesionGEORGE JACOBSON, M.D.
2. Pediatric Bone Lesion.....BERNARD O'LAUGHLIN, M.D.
3. Bone LesionIVAN MILLER, M.D.
4. Pediatric Skull Lesion.....HARVEY HUMPHREY, M.D.
5. Skull LesionEVELYN SIRIS, M.D.
6. Bone Lesion with Response to Cortisone.....NORMAN N. KEEF, M.D.
7. Chest LesionJOHN B. HAMILTON, M.D., and WALTER STILSON, M.D.
8. Lung LesionM. A. SISSON, M.D.
9. Heart CaseWILLIAM W. SAUNDERS, M.D.
10. Heart CaseWILLIAM L. ANDERSON, M.D.
11. Gastrointestinal LesionEUGENE FREEDMAN, M.D.
12. Neurological LesionJOHN CAMP, M.D.

THERAPY SESSION—2:00 p.m. to 4:30 p.m.

1. Treatment of a Skin Carcinoma Recurrent After
IrradiationRICHARD A. SHEPARD, M.D.
2. High-Voltage X-Ray Treatment of a Bladder Tumor.....EUGENE G. TAINTER, M.D.
3. Carcinoma of the Bladder.....HENRY JAFFE, M.D.
4. Reticulum Cell Sarcoma of Bone.....HAROLD TOMPKINS, M.D.
5. Carcinoma of Cervix.....JAMES F. NOLAN, M.D.

Pathology

Auditorium, Los Angeles County Medical Association Building,
1925 Wilshire Boulevard

The Pre-Convention Conference on Microscopic Tumor Pathology will be held from 9:30 a.m. to 12 noon and from 2 to 4 p.m. under the chairmanship of Dr. Sidney Madden, Professor of Pathology, U.C.L.A. School of Medicine. Dr. Louisa E. Keasbey, Los Angeles, will be the moderator. Dr. Keasbey's subject will be "Tumors of the Salivary Gland, Skin Adnexa and Breast." Members who attend this conference are requested to register now with Dr. E. M. Hall, Tumor Tissue Registry, C.M.A. Cancer Commission, Los Angeles County General Hospital, 1200 North State Street, Los Angeles 33.

6:30 p.m.—Hotel Statler

Dinner Meeting of the California Society of Pathologists. Guest Speaker: John R. Schenken, M.D., Professor of Pathology, University of Nebraska. For reservations contact H. Russell Fisher, M.D., secretary, 500 South Lucas Avenue, Los Angeles 17.

6:00 p.m.—Conference Room 3, Biltmore Hotel

Dinner Meeting of the Cancer Commission and Advisory Committee

Information

BADGES. It is important that badges be worn at all times. Admission to scientific meetings is by badge only.

COUNCIL. The first meeting of the Council will be held Saturday, May 23, at 9:30 a.m., Biltmore Hotel. Further meetings will be held each morning at 7:30 a.m. in Conference Room 6, Biltmore Hotel.

DELEGATES. For a list of delegates, meeting times and places, see Pages 378 to 382 of this program.

EMERGENCY CALLS AND MESSAGES. Each physician should notify his own secretary regarding the *exact* section he plans to attend and the time of his attendance. It is up to the individual physician to keep his own office staff so informed. The Association will attempt to transmit messages to the individual physician *when* these are delivered to the Information Desk, Ballroom, at the south end of the Galeria, with the information concerning the exact location of the prospective recipient of the message.

In cases of emergency, when the doctor cannot be located, the call will be referred to Emergency Call Service of the

Los Angeles County Medical Association, DUNKIRK 7-7175; Sunday and evenings after 5:00 p.m., DUNKIRK 7-8141.

EXHIBITS. Technical Exhibits are in the Ballroom, Ballroom Foyer and Music Room. See list on Pages 369 to 377.

Scientific Exhibits may be seen in the North and Main Galeria. See list on Page 365.

Medical Motion Pictures will be shown daily in the Galeria Room. For schedule see Pages 365 to 367.

You are urged to visit and attend all exhibits.

MEETING TIMES AND PLACES. See chart on Page 343 for exact times and places of general and sectional meetings.

PRESIDENT'S DINNER DANCE. The Annual President's Dinner Dance will be held Monday night, May 25 in the Biltmore Bowl, at 7:30 p.m. Tickets are on sale at the Registration Desk. Formal dress is optional.

REGISTRATION AND INFORMATION

Registration and information desks are located in the Ballroom at the south end of the Galeria of the Biltmore Hotel. **ALL MEMBERS, GUESTS, AND VISITORS** are requested to register immediately on arrival. There is no charge for registration. Registration desks are open from 9:00 a.m. to 5:00 p.m. daily. **ADMISSION TO THE GENERAL AND SECTION SESSIONS AND EXHIBIT AREAS IS BY BADGE ONLY.**

Entertainment

1. **Annual President's Dinner**, Monday, May 25, Biltmore Bowl. Please secure tickets early.

2. **The Annual Golf Tournament** will be held Tuesday afternoon, May 26, at the Wilshire Country Club. All members attending the meeting are welcome to play. Tee off time 10 a.m. on. Numerous prizes will be awarded. No reservations are necessary. For further information contact W. L. Roberts, M.D., Secretary, Southern California Medical Golf Association, 727 W. Seventh Street, Los Angeles; telephone TUCKER 2417.

3. **California Society of Allergy Reception and Dinner**, Tuesday, May 26, Conference Room 2; Luncheon, Tuesday, May 26, Bowl Foyer. For information and reservations

contact Elizabeth Sirmay, M.D., 133 S. Lasky Drive, Beverly Hills.

4. **U.C. Medical School Alumni Association Luncheon**, Monday, May 25. For information and reservations contact John Fernald, M.D., 3875 Wilshire Boulevard, Los Angeles.

WOMEN'S ENTERTAINMENT—Tickets available for TV and radio broadcasts for members and guests. Inquire at Woman's Auxiliary table marked **Entertainment** located in the Main Galeria.

Reception honoring Mrs. Lewis A. Alesen, Monday, May 25, 4:00 to 6:00 p.m., Rendezvous Room, Biltmore Hotel.

Other Meetings — Ancillary Organizations

WEDNESDAY, MAY 27

American College of Chest Physicians—California Chapter—Conference Room 1, Biltmore Hotel, 9:30 a.m. to 5:00 p.m.

California Heart Association—Auditorium, Southern California Edison Building, 2:00 p.m. to 5:00 p.m.

Conference of Local Health Officers—Auditorium, Sunkist Building, 9:30 a.m. to 5:00 p.m.

Pacific Coast Oto-Ophthalmological Society Annual Meeting—Ambassador Hotel.

Guest Speakers



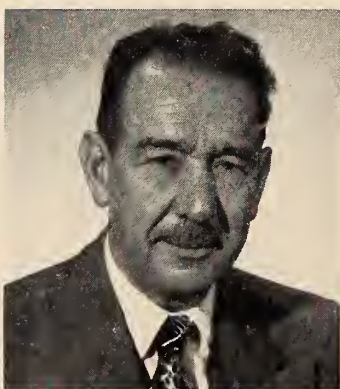
CLARENCE MANION



JOHN H. GIBBON, JR.



JOHN H. TALBOTT



RICHARD A. KERN



EDGAR BURNS

Guest Speakers

CLARENCE MANION, J.D., South Bend, Indiana—Formerly Dean, University of Notre Dame College of Law, and Founder of the Natural Law Institute at the University of Notre Dame.

JOHN H. GIBSON, JR., M.D., Philadelphia, Pennsylvania—Professor of Surgery, Jefferson Medical College.

JOHN H. TALBOTT, M.D., Buffalo, New York—Professor of Medicine, University of Buffalo School of Medicine.

RICHARD A. KERN, M.D., Philadelphia, Pennsylvania—Professor of Internal Medicine, Temple University School of Medicine.

EDGAR BURNS, M.D., New Orleans, Louisiana—Professor of Urology, Tulane University of Louisiana School of Medicine.

Other Section Speakers From Out of State

HINTON D. JONEZ, M.D., Tacoma, Washington—Guest of Section on Allergy.

JOHN H. MOYER, M.D., Houston, Texas—Professor of Pharmacology, Baylor University School of Medicine. Guest of Section on General Medicine.

JOHN R. SCHENKEN, M.D., Omaha, Nebraska—Professor of Pathology, University of Nebraska College of Medicine. Guest of Section on Pathology and Bacteriology.

ERNEST L. STEBBINS, M.D., Baltimore, Maryland—Dean, School of Hygiene and Public Health, Johns Hopkins University School of Medicine. Guest of Section on Public Health.

ARNOLD P. FRIEDMAN, M.D., NAOMI DE SOLA POOL, M.D., and THEODORE J. C. VON STORCH, M.D., New York, New York—Neurological Institute. Guests of Section on Psychiatry and Neurology.

SCIENTIFIC SESSIONS

	SUNDAY MAY 24 All Day	MONDAY MAY 25 A.M. P.M.	TUESDAY MAY 26 A.M. P.M.	TUESDAY MAY 26 Evening	WEDNESDAY MAY 27 All Day	THURSDAY MAY 28 A.M. P.M.
BILTMORE HOTEL Biltmore Bowl				8:00 p.m. General Meeting Open to Public		
Renaissance Room	9:30 a.m. House of Delegates	9:30 General Practice	9:30 Pediatrics	2:00 General Surgery General Medicine Radiology	9:30 a.m. House of Delegates	9:30 General Medicine
Conference Room 1		9:30 Radiology	9:30 Radiology	2:00 Pediatrics		2:00 Public Health General Practice Pathology and Bacteriology Pediatrics
Conference Room 2		9:30 Industrial Medicine and Surgery		2:00 Eye, Ear, Nose and Throat		9:30 Psychiatry and Neurology
Conference Room 4				2:00 Urology		2:00 Obstetrics and Gynecology
Conference Room 5				2:00 Allergy		
Conference Room 8		9:30 Pathology and Bacteriology		2:00 Anesthesiology		
GALERIA ROOM		9:00 a.m. to 5:30 p.m. Medical Motion Pictures	9:00 a.m. to 5:30 p.m. Medical Motion Pictures		9 a.m. to 5:30 p.m. Medical Motion Pictures 7 p.m. to 11:00 p.m.	9:00 a.m. to 4:00 p.m. Medical Motion Pictures
BAPTIST CHURCH CHAPEL Fifth and So. Olive						9:30 General Practice
SO. CALIFORNIA EDISON BLDG. Fifth and So. Grand		9:30 General Surgery	9:30 General Medicine	2:00 Industrial Medicine and Surgery General Practice		9:30 General Surgery
SUNKIST BUILDING Fifth and So. Flower		9:30 Urology Pediatrics	9:30 Dermatology and Syphilology	8:00 p.m. General Meeting Open to Public Biltmore Bowl		9:30 Public Health

COUNCIL OF THE C.M.A. MEETS DAILY AT 7:30 A.M. IN CONFERENCE ROOM 6, BILTMORE HOTEL

SCIENTIFIC EXHIBITS—North and Main Galleries, Biltmore Hotel

HOUSE OF DELEGATES meets Sunday and Wednesday, 9:30 a.m.

TECHNICAL EXHIBITS—Music Room, Ballroom, and Ballroom Foyer, Biltmore Hotel

MEDICAL MOTION PICTURES—Galeria Room, Biltmore Hotel

SCIENTIFIC SESSIONS

General Meetings

FIRST GENERAL MEETING

MONDAY, MAY 25

1:30—Renaissance Room, Biltmore Hotel

Chairman: Lewis A. Alesen, M.D., Los Angeles

1:30—Address of Welcome—Paul Foster, M.D., President, Los Angeles County Medical Association.

1:35—Greetings from the Woman's Auxiliary—Mrs. Raleigh W. Burlingame, President, Woman's Auxiliary to the California Medical Association.

1:40—Sarcoidosis—John H. Talbott, M.D., Buffalo, N. Y., by invitation.

2:00—Unilateral Renal Disease and Hypertension—Edgar Burns, M.D., New Orleans, La., by invitation.

2:30—The Contribution of the Investigator to the Development of Modern Surgery—John H. Gibbon, Jr., M.D., Philadelphia, Pa., by invitation.

3:00—The Growing Problem of Suicide—Richard A. Kern, M.D., Philadelphia, Pa., by invitation.

3:30—Recess.

Clinical-Pathological Conference

Moderator: L. Henry Garland, M.D., San Francisco

3:40—Case No. 1—Pathologist, Hugh A. Edmondson, M.D., Los Angeles. Surgeon, John H. Gibbon, Jr., M.D., Philadelphia, Pa., by invitation.

4:20—Case No. 2—Pathologist, Alvin J. Cox, M.D., San Francisco. Clinician, John H. Talbott, M.D., Buffalo, N. Y., by invitation.

SECOND GENERAL MEETING

Open to the Public

TUESDAY EVENING, MAY 26

8:00—Biltmore Bowl, Biltmore Hotel

8:00—Introductory Remarks—Lewis A. Alesen, M.D., Los Angeles.

8:05—Blueprint for Freedom—Clarence Manion, J.D., South Bend, Ind., by invitation.

EMERGENCY CALLS

Notify your office or exchange regarding the meetings you plan to attend. In cases of emergency, when the doctor cannot be located, the call will be referred to Emergency Call Service of the Los Angeles County Medical Association, DUnkirk 7-7175; Sunday and evenings after 5:00 p.m., DUnkirk 7-8141.

ADMISSION TO SESSIONS AND EXHIBITS BY REGISTRATION BADGE ONLY

Section Meetings

GENERAL MEDICINE

Chairman.....J. Malcolm Stratton, M.D., Berkeley
 Secretary.....William D. Evans, M.D., North Hollywood
 Assistant Secretary.....Edgar Wayburn, M.D., San Francisco



J. MALCOLM STRATTON
Chairman



WILLIAM D. EVANS
Secretary

TUESDAY, MAY 26

- 9:30—Auditorium, Southern California Edison Building
 9:30—Methionine Metabolism in Patients with Hepatic Damage—Harry E. Balch, M.D., Oakland.
 9:45—Systemic Lupus Erythematosus—Edmund L. Dubois, M.D., Beverly Hills.
 10:00—Advances in the Treatment of Infectious Diseases with Antimicrobial Drugs—H. Corwin Hinshaw, M.D., San Francisco.
 10:15—Long Term Therapy of Rheumatoid Arthritis with Cortisone—Ephraim P. Engleman, M.D., San Francisco.
 10:30—The Recognition of Gout—Alexander G. Bartlett, M.D., San Francisco.
 10:40—Recess.
 10:45—Phenylbutazone—An Evaluation of Its Use—Willard G. Snow, M.D., San Francisco.
 10:55—Recent Advances in the Understanding of the Metabolism of Uric Acid as Determined by Isotope Studies—John H. Talbott, M.D., Buffalo, N. Y., by invitation.
 11:25—Round Table Discussion—Gout and Arthritis.
 Moderator: John H. Talbott, M.D., Buffalo, N. Y., by invitation.
 Members of the Panel: Ephraim P. Engleman, M.D., Alexander G. Bartlett, M.D., and Peter H. Forsham, M.D., San Francisco.

TUESDAY, MAY 26

2:00—Renaissance Room, Biltmore Hotel
 Joint Meeting with Sections on General Surgery and Radiology
 Symposium on Diseases of the Esophagus
 For program, see Section on General Surgery.

THURSDAY, MAY 28

9:30—Renaissance Room, Biltmore Hotel

Symposium

Hypertensive Drugs

- 9:30—The Clinical Evaluation of Hydergine (C.C.K. 179) in Arterial Hypertension—Ralph M. Tandowsky, M.D., Los Angeles.
 9:40—Outpatient Treatment of Fifteen Hypertensive Patients with Orally Administered Hexamethonium Salts and Apresoline—Laurence J. Stuppy, M.D., Los Angeles.
 9:50—The Use of Apresoline Compared with the Use of Placebos in the Treatment of Hypertensive Diseases—David H. Merrill, M.D., Los Angeles.
 10:00—Rauwolfia Serpina—A New Drug for the Therapy of Essential and Malignant Hypertension—Meyer Friedman, M.D., San Francisco.
 10:10—The Use of Hexamethonium in Arterial Hypertension—David A. Rytand, M.D., San Francisco.
 10:25—Recess.
 10:30—Round Table Discussion.
 Moderator: John H. Talbott, M.D., Buffalo, N. Y., by invitation.
 Members of the Panel: Ralph M. Tandowsky, M.D., Laurence J. Stuppy, M.D., and David H. Merrill, M.D., Los Angeles; Meyer Friedman, M.D., San Francisco; and John H. Moyer, M.D., Houston, Texas, by invitation.
 11:25—Business Meeting and Election of Officers.
 11:30—Diffuse Collagen Diseases—John H. Talbott, M.D., Buffalo, N. Y., by invitation.

GENERAL SURGERY

Chairman.....Poul C. Samson, M.D., Oakland
 Secretary.....Arthur C. Pattison, M.D., Pasadena
 Assistant Secretary.....William Brock, M.D., Stockton



PAUL C. SAMSON
Chairman



ARTHUR C. PATTISON
Secretary

MONDAY, MAY 25

9:30—Auditorium, Southern California Edison Building

Symposium

Nutrition and Electrolytes

- 9:30—Introductory Remarks—Grams Per Cent vs. Milliequivalents—Milton M. Ashley, M.D., Beverly Hills.
- 9:40—Maintenance Nutritional Requirements of the Surgical Patient—Richard E. Gardner, M.D., San Francisco, and Harold A. Harper, Ph.D., by invitation, San Francisco.
- 9:55—The Kidney—Master Controller of Fluid-Electrolyte Balance—Richards P. Lyon, M.D., Oakland, by invitation.
- 10:10—The Importance of Sodium in the Surgical Patient—S. Austin Jones, M.D., Los Angeles, by invitation.
- 10:25—The Importance of Potassium in the Surgical Patient—George C. Henegar, M.D., Oakland.
- 10:40—The Management of Difficult Water and Electrolyte Problems in Surgical Practice with the Use of Water and Electrolyte Balance Sheet—H. H. Belding III, M.D., Riverside.
- 10:55—Treatment of Refractory Shock—Edward N. Snyder, M.D., Pasadena.
- 11:10—Some Comments on Convalescence Following Major Operations—John H. Gibbon, Jr., M.D., Philadelphia, Pa., by invitation.
- 11:40—Question and Answer Period.

TUESDAY, MAY 26

2:00—Renoissance Room, Biltmore Hotel

Joint Meeting with the Sections on General Medicine and Radiology

Symposium

Diseases of the Esophagus

- 2:00—The Medical Aspects of Esophageal Disease—Dwight L. Wilbur, M.D., San Francisco.
- 2:25—The Esophagus in Radiologic Problems—Robert K. Arbuckle, M.D., Oakland, Chairman, Section on Radiology.
- 2:45—Injuries and Wounds of the Esophagus: Their Diagnosis and Treatment—Paul C. Samson, M.D., Oakland, Chairman, Section on General Surgery.
- 3:05—The Non-Surgical Management of Esophagitis, Peptic Ulcer and Early Stricture—William L. Rogers, M.D., San Francisco.
- 3:25—The Surgical Treatment of Carcinoma of the Esophagus—John H. Gibbon, Jr., M.D., Philadelphia, Pa., by invitation.
- 3:50—Recess.
- 4:00—Round Table Discussion.
 Moderator: John H. Gibbon, Jr., Philadelphia, Pa., by invitation.
 Members of the Panel: Dwight L. Wilbur, M.D., San Francisco; Robert K. Arbuckle, M.D., Oakland; and William L. Rogers, M.D., San Francisco.

(Continued on next page)

THURSDAY, MAY 28

- 9:30—Auditorium, Southern California Edison Building
- 9:30—Intestinal Intubation—Its Use and Abuse—
Louis Sperling, M.D., Beverly Hills.
- 9:50—Mechanical Bowel Obstruction Due to Inflammatory Conditions—Milton Gordon, M.D.,
Bakersfield.
- 10:10—Rupture of the Gastrointestinal Tract Due to
Non-Penetrating Trauma—Howard Kirtland,
Jr., M.D., San Diego.
- 10:30—Traumatic Pancreatitis—Clarence J. Berne,
M.D., Los Angeles, and Robert L. Walters,
M.D., by invitation, Los Angeles.
- 10:50—Observations on the Nature of the Solitary
Pulmonary Lesion—Ivan A. May, M.D., Oak-
land.
- 11:10—Business Meeting and Election of Officers.
- 11:20—Present Concepts in the Management of Pe-
ripheral Arteriosclerosis—Edwin J. Wylie,
M.D., San Francisco.
- 11:40—Lumbar Sympathectomy in the Older Age
Groups—Herbert J. Movius II, M.D., Long
Beach, by invitation.
- 12:00—Vasospastic Disorders of the Extremities As-
sociated with Injury—Vance M. Strange, M.D.,
San Francisco.
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EMERGENCY CALLS AND MESSAGES

Each physician should notify his own secretary regarding the exact section he plans to attend and the time of his attendance. It is up to the individual physician to keep his own office staff so informed. The Association will attempt to transmit messages to the individual physician *when* these are delivered to the Information Desk, Ballroom, at the south end of the Galeria, with the information concerning the exact location of the prospective recipient of the message.

In cases of emergency, when the doctor cannot be located, the call will be referred to Emergency Call Service of the Los Angeles County Medical Association, DUnkirk 7-7175; Sunday and evenings after 5:00 p.m. DUnkirk 7-8141.

No outside phone calls will be permitted from the telephone located at the Information Desk. Pay telephones are located in the Main Galeria and in the lower lobby of the hotel, near the travel agency office.

GENERAL PRACTICE

Chairman Merlin L. Newkirk, M.D., Santa Ana
 Secretary A. Bradford Carson, M.D., Oakland
 Assistant Secretary Joseph W. Telford, M.D., San Diego



MERLIN L. NEWKIRK
Chairman



A. BRADFORD CARSON
Secretary

MONDAY, MAY 25

- 9:30—Renaissance Room, Biltmore Hotel
 9:30—Saving Maternal and Neonatal Lives—James W. Ravenscroft, M.D., San Diego.
 10:00—The Management of Premature Labor—E. W. Cartwright, M.D., Pasadena.
 10:30—An Evaluation of Factors in Obstetrical Analgesia—Harry S. Fist, M.D., Los Angeles.
 11:00—The Management and Mismanagement of Breech Presentation—A. C. Mietus, M.D., Los Angeles.
 11:30—Practical Considerations in the Management of Allergic Patients—Richard A. Kern, M.D., Philadelphia, Pa., by invitation.

TUESDAY, MAY 26

- 2:00—Auditorium, Southern California Edison Building
 Joint Meeting with the Section on Industrial Medicine and Surgery
 For program, see Section on Industrial Medicine and Surgery.

THURSDAY, MAY 28

- 9:30—Chapel, Baptist Church
 9:30—Chronic Brucellosis: A Common Dilemma for Practitioners—Joseph F. Griggs, M.D., Claremont.
 10:00—Dizziness, Vertigo and Syncope—Kurt Gunther, M.D., Santa Barbara, and Roy Swartout, III, M.D., El Monte.
 10:30—Management of Postoperative Distention—Edward B. Dewey, M.D., Pasadena.
 11:00—Differential Diagnosis of Cecal and Pericecal Lesions—Richard E. Ottoman, M.D., Los Angeles, by invitation; and John H. Woodruff, M.D., Huntington Park.
 11:30—Business Meeting.

THURSDAY, MAY 28

- 2:00—Renaissance Room, Biltmore Hotel
 Joint Meeting with the Sections on Public Health, Pediatrics, Pathology and Bacteriology.
 Symposium on Encephalitis
 For program, see Section on Public Health.

VISIT THE TECHNICAL AND SCIENTIFIC EXHIBITS

ALLERGY

Chairman.....M. Coleman Harris, M.D., San Francisco
 Vice-Chairman.....Groce M. Tolbott, M.D., San Francisco
 Secretary.....Normon Shure, M.D., Los Angeles



M. COLEMAN HARRIS
 Chairman



NORMAN SHURE
 Secretary

TUESDAY, MAY 26

9:30—Conference Room 5, Biltmore Hotel

9:30—**Failure of Tyrosine-Niacinamide-Pyridoxine Mixture to Influence Allergic Disease**—Walter R. MacLaren, M.D., Pasadena; Ben C. Eisenberg, M.D., and David M. Goldstein, M.D., Beverly Hills.

Discussion.

10:00—**A Clinical and Physiological Appraisal of Dyspnea**—Walter E. Macpherson, M.D., Los Angeles.

Discussion.

10:30—**Chairman's Address: The Practice of Allergy—1953**—M. Coleman Harris, M.D., San Francisco.

11:15—**The Allergic Aspects of Multiple Sclerosis**—Hinton D. Jonez, M.D., Tacoma, Wash., by invitation.

Discussion.

12:00—**Luncheon Meeting—The California Society of Allergy**—Bowl Foyer.

TUESDAY, MAY 26

2:00—Conference Room 5, Biltmore Hotel

2:00—**Transient Markedly Elevated Local Pollen Counts: Is This a New Trend in California?**—John S. O'Toole, M.D., Riverside.

Discussion.

2:30—**Advances in the Treatment of Asthma in the Light of Current Medical Knowledge**—Hyman Miller, M.D., Beverly Hills.

Discussion.

3:00—**Diagnostic Problems of Cephalalgia**—Ralph Bookman, M.D., Los Angeles.

Discussion.

3:30—**Further Studies on the Use of Raw Foods as Skin Testing Material in Allergic Disorders**—Giacomo R. Ancona, M.D., and Irwin Schumacher, M.D., San Francisco.

Discussion.

4:00—**Experiences with Piromen in the Treatment of Allergic Disorders**—Granville F. Knight, M.D., Santa Barbara.

Discussion.

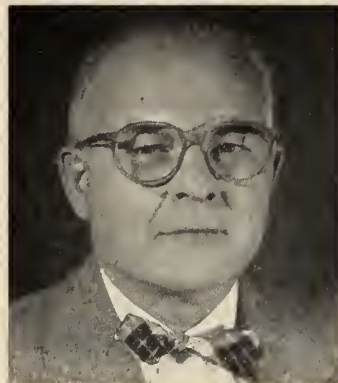
VISIT THE TECHNICAL AND SCIENTIFIC EXHIBITS

ANESTHESIOLOGY

Chairman.....Nevin H. Rupp, M.D., Los Angeles
Secretary.....Joseph H. Failing, M. D., San Marina
Assistant Secretary.....Marshall L. Skaggs, M.D., San Francisco



NEVIN H. RUPP
Chairman



JOSEPH H. FAILING
Secretary

TUESDAY, MAY 26

2:00—Conference Room 8, Biltmore Hotel

Panel Discussion

Intravenous Therapy

Moderator: Edward B. Tuohy, M.D., Los Angeles.

Members of the Panel: John B. Dillon, M.D., Pasadena; Frank J. Murphy, M.D., San Francisco; Desiderio A. Roman, M.D., Los Angeles, and Ernest H. Warnock, M.D., San Marino.

The panel discussion will be concerned with clinical use of any kind of medication that is given intravenously—glucose, blood, molar lactate, Pentothal, Surital, morphine, Demerol, Pantopon, Nal-line, Tubocurarine, Syncurine, Succinylcholine, Tensilon, Procaine, Pontocaine, Xylocaine, Prone-styl and others.

The purpose of the discussion is to bring out both the use and abuse of various agents and show the advantages as well as the disadvantages of certain agents.

3:20—Recess.

3:30—Round Table Discussion.

EMERGENCY CALLS

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DERMATOLOGY AND SYPHILOLOGY

Chairman.....Rees B. Rees, M.D., San Francisco
 Secretary.....Frances Keddle, M.D., Palo Alto
 Assistant Secretary.....Walter F. Schwartz, M.D., Pasadena



REES B. REES
 Chairman



FRANCES KEDDIE
 Secretary

TUESDAY, MAY 26

9:30—Auditorium, Sunkist Building

- 9:30—Evaluation of Entozyme Treatment in Psoriasis—Arne E. Ingels, M.D., San Francisco.
- 10:00—Nutritional Aspects in Some Fungous Diseases—Joseph D. Walters, M.D., Sherman Oaks.
- 10:30—Interrelationships Between Dermatologist, Employee (Patient), Employer and Insurance Carrier—A. Fletcher Hall, M.D., Santa Monica.
- 11:00—Dermatopathology, Its Goal and Limitation—Paul Fasal, M.D., San Rafael.
- 11:30—Dermatoses of the Hands—Clement E. Couter, M.D., Long Beach.
- 12:00—Business Meeting and Election of Officers.

TUESDAY, MAY 26

2:00—Auditorium, Sunkist Building

- 2:00—Coccidioidomycosis as an Occupational Disease—Norman E. Levan, M.D., Bakersfield.
- 2:30—Chairman's Address—Anogenital Moniliasis—Rees B. Rees, M.D., San Francisco.

- 3:00—Primary Inoculation Cutaneous Coccidioidomycosis: a Clinical Rarity—Charles E. Smith, M.D., Berkeley; J. Walter Wilson, M.D., Los Angeles, and Orda A. Plunket, Ph.D., Los Angeles, by invitation.
- 3:30—The Use of Selenium Sulfide Ointment in the Treatment of Seborrheic Dermatitis of the Glabrous Skin and Other Dermatoses: A Preliminary Report—Samuel Ayres III, M.D., and Samuel Ayres, Jr., M.D., Los Angeles.
- 3:40—The Use of Silicones to Protect the Skin—Grant Morrow, M.D., San Francisco
- 3:50—The Use of Silicones in Dermatology—Ralph T. Behling, M.D., San Mateo.
- 4:00—The Treatment of Recalcitrant Vesiculopustular Eruptions of the Hands and Feet with a Sensitized Mixed Vaccine—Edward A. Levin, M.D., and James H. Bennett, M.D., San Francisco.
- 4:10—Treatment of Chronic Discoid Lupus Erythematosus with Quinacrine Hydrochloride—B. L. Rhodes, M.D., San Francisco, by invitation, and M. F. Allende, M.D., San Francisco.
- 4:20—Discussion.

VISIT THE TECHNICAL AND SCIENTIFIC EXHIBITS

EYE, EAR, NOSE AND THROAT

Chairman Robert C. McNaught, M.D., San Francisco
Secretary Alfred R. Robbins, M.D., Los Angeles
Assistant Secretary Francis A. Saay, M.D., San Francisco



ROBERT C. McNAUGHT
Chairman



ALFRED R. ROBBINS
Secretary

TUESDAY, MAY 26

2:00—Conference Room 2, Biltmore Hotel

Symposium

Exophthalmos

- 2:00—Exophthalmos from the Standpoint of the Endocrinologist—Donald William Petit, M.D., Pasadena.
2:20—Exophthalmos from the Standpoint of the Ophthalmologist—A. Ray Irvine, Jr., M.D., Beverly Hills.
2:40—Exophthalmos from the Standpoint of the Otolaryngologist—Max Pohlman, M.D., Los Angeles.

3:00—Exophthalmos from the Standpoint of the Neurological Surgeon—Howard C. Naffziger, M.D., San Francisco.

3:20—Questions and Round Table Discussion.

Moderator: Robert C. McNaught, M.D., San Francisco.

Members of the Panel: Donald W. Petit, M.D., Pasadena; A. Ray Irvine, Jr., M.D., Beverly Hills; Max Pohlman, M.D., Los Angeles; and Howard C. Naffziger, M.D., San Francisco.

4:00—Business Meeting and Election of Officers.

PACIFIC COAST OTO-OPHTHALMOLOGICAL SOCIETY

Annual Meeting

AMBASSADOR HOTEL, LOS ANGELES

Sunday, May 24 – Thursday, May 28

All clinical meetings are open to members of the California Medical Association

INDUSTRIAL MEDICINE AND SURGERY

Chairman.....Orris R. Myers, M.D., Eureka
Secretary.....Packard Thurber, Jr., M.D., Los Angeles
Assistant Secretary.....Dan Kilroy, M.D., Sacramento



ORRIS R. MYERS
Chairman



PACKARD THURBER, JR.
Secretary

MONDAY, MAY 25

9:30—Conference Room 2, Biltmore Hotel

9:30—Surgical Treatment of Low Back Injuries—
Robert Bingham, M.D., Riverside.
Discussion.

10:00—Experiences with Hip Prostheses—Homer C.
Pheasant, M.D., Los Angeles.
Discussion.

10:30—The Primary Repair of Traumatic Digital
Skeletal Losses by Phalangeal Recession—
Carl E. Nemethi, M.D., Los Angeles.
Discussion.

11:00—The Postphlebotic Syndrome: Factors in Prog-
nosis—Roy J. Popkin, M.D., Los Angeles.
Discussion.

11:30—Medical Evidence Before the Industrial Acci-
dent Commission—Edmund D. Leonard, J.D.,
San Francisco, by invitation.
Discussion.

12:00—Business Meeting and Election of Officers.

TUESDAY, MAY 26

2:00—Auditorium, Southern California Edison Building
Joint Meeting with Section on General Practice

2:00—Tendon Surgery in the Hand—James N. Wil-
son, M.D., Los Angeles.
Discussion.

2:30—The Early Surgical Treatment of Peripheral
Nerve Injuries—Eugene M. Webb, M.D., San
Francisco.
Discussion.

3:00—The Role of the Circulation in the Causation
of Faulty Healing of Industrial Injuries of the
Lower Extremities—M. Laurence Montgom-
ery, M.D., San Francisco.
Discussion.

3:30—Present Status of Union Health and Welfare
Plans in the San Francisco Bay Area—Sam-
uel R. Sherman, M.D., San Francisco.
Discussion.

4:00—Chairman's Address: The Relation of the
General Practitioner to Industrial Practice—
Orris R. Meyers, M.D., Eureka.
Discussion.

BRING PROPER IDENTIFICATION FOR REGISTRATION

OBSTETRICS AND GYNECOLOGY

Chairman.....Hervey K. Graham, M.D., San Diego
 Vice-Chairman.....Donald W. de Carle, M.D., San Francisco
 Secretary.....Harald K. Marshall, M.D., Glendale



HERVEY K. GRAHAM
 , Chairman



HAROLD K. MARSHALL
 Secretary

THURSDAY, MAY 28

9:30—Conference Room 2, Biltmore Hotel

- 9:30—External Version in Private Practice—William R. Schumann, M.D., Los Angeles.
 Discussion by A. M. McCausland, M.D., Los Angeles.
- 10:00—Routine Manual Removal of Placenta—Ralph L. Hoffman, M.D., San Diego.
 Discussion by Philip A. Reynolds, M.D., Los Angeles, and Thomas E. Farthing, M.D., San Mateo.
- 10:30—Review of 13,000 Consecutive Deliveries in a General Hospital Without a Death—Stirling G. Pillsbury, M.D., Long Beach.
 Discussion by Donald Dallas, M.D., San Francisco, and Donald G. Tollefson, M.D., Los Angeles.
- 11:00—Management of the Pregnant Diabetic—Ervin E. Nichols, M.D., San Marino.
 Discussion by James Short, M.D., and Paula Horn, M.D., Los Angeles.
- 11:30—Business Meeting and Election of Officers.

THURSDAY, MAY 28

2:00—Conference Room 2, Biltmore Hotel

- 2:00—Chairman's Address—Hervey Graham, M.D., San Diego.
- 2:30—Massive Obstetrical and Gynecological Hemorrhages—Leroy E. Smale, M.D., and John Knauer, M.D., Bakersfield.
 Discussion by Alex Glyn Davies, M.D., Los Angeles, and Ralph C. Benson, M.D., San Francisco.
- 3:00—Four Years' Experience by Private Clinical Group with Papanicolaou Vaginal Smears—Purvis L. Martin, M.D., San Diego.
 Discussion by Herbert F. Traut, M.D., San Francisco.
- 3:30—Ureteral Injury During Vaginal Surgery—Richard D. Pettit, M.D., Pasadena.
 Discussion by Richard W. Jacobsen, M.D., Pasadena.

ADMISSION TO SESSIONS AND EXHIBITS BY REGISTRATION BADGE ONLY

PATHOLOGY AND BACTERIOLOGY

Chairman.....Charles M. Blumenfeld, M.D., Sacramento
 Secretary.....A. R. Camero, Los Angeles
 Assistant Secretary.....Paul Michael, Oakland



CHARLES M. BLUMENFELD
 Chairman



A. R. CAMERO
 Secretary

MONDAY, MAY 25

9:30—Conference Room 8, Biltmore Hotel

9:30—Preservation of Acid Fast Bacilli—Emil Bogen, M.D., Olive View, and Drake Will, Olive View, by invitation.

9:50—Situs Inversus and Cardiovascular Malformation with Congenital Absence of Spleen—Herbert Harder, M.D., by invitation, and A. F. Brown, M.D., Glendale.

10:10—Metastatic Carcinoma of the Adrenal—Weldon K. Bullock, M.D., San Gabriel, and Albert E. Hirst, Jr., M.D., Los Angeles.

10:30—Gliomas and Diploic Dermoids of the Face—Louisa E. Keasbey, M.D., Los Angeles.

11:00—Primary Thrombocytopenic Purpura—John R. Schencken, M.D., Omaha, Neb., by invitation.

12:30—Conference Room 1, Biltmore Hotel

12:30—Round Table Luncheon (by invitation only)—sponsored by the Section on Pathology and Bacteriology and the California Society of Pathologists.

MONDAY, MAY 25

2:00—Conference Room 8, Biltmore Hotel

2:00—Acute Epiglottitis—W. C. Thomas, M.D., Los Angeles, and F. A. Stone, M.D., Los Angeles, by invitation.

2:20—Chairman's Address: Hyaline Membrane Disease of the Newborn—Charles M. Blumenfeld, M.D., Sacramento.

3:00—Rh Antibody Testing—The Choice of Technique—Paul G. Hattersley, M.D., Sacramento.

3:20—Business Meeting and Election of Officers.

3:30—Adjourn to Renaissance Room, Clinical-Pathological Conference.

THURSDAY, MAY 28

2:00—Renoissance Room, Biltmare Hotel

Joint Meeting with Sections on Public Health, General Practice and Pediatrics.

Symposium on Encephalitis

For program, see Section on Public Health.

VISIT THE TECHNICAL AND SCIENTIFIC EXHIBITS

PEDIATRICS

Chairman.....Alvin H. Jacobs, M.D., San Francisco
 Secretary.....Clement J. Molony, M.D., Beverly Hills
 Assistant Secretary.....Gordon F. Williams, Menlo Park



ALVIN H. JACOBS
Chairman



CLEMENT J. MOLONY
Secretary

MONDAY, MAY 25

9:30—Auditorium, Sunkist Building
 Joint Meeting with Section on Urology
 For Program, see Section on Urology.

TUESDAY, MAY 26

- 9:30—Renoissance Room, Biltmore Hotel
- 9:30—Problems in the Medical Management of Urinary Tract Infections—Ernest Jawetz, M.D., San Francisco.
 Discussion by William L. Hewitt, M.D., Los Angeles.
- 10:00—Radioactive Iodine Treatment of Children with Hyperthyroidism—Leon Oettinger, Jr., M.D., San Marino.
 Discussion by Lorye E. Hackworth, M.D., Los Angeles.
- 10:30—Developmental Diagnosis as an Aid in Detecting Delayed Development—Russell Sands, M.D., Santa Monica.
 Discussion by Arthur H. Parmelee, Sr., Beverly Hills.
- 11:00—The Effect of Atomic Radiation in Pregnancy—A Study of Women Pregnant at the Time of the Atom Bomb Explosion in Nagasaki—Stanley W. Wright, M.D., James M. Yamazaki, M.D., and Phyllis M. Wright, M.D., Los Angeles, all by invitation.
 Discussion by Robert R. Newell, M.D., San Francisco.
- 11:45—Business Meeting and Election of Officers.

TUESDAY, MAY 26

2:00—Conference Room 1, Biltmore Hotel

Panel Discussion

What's New in Pediatrics

- 2:00—Maternal Rubella—Carl A. Erickson, M.D., Pasadena.
- 2:20—Radiation in ENT Practice—Frank J. Novak, M.D., Menlo Park.
- 2:40—Poliomyelitis Research—John M. Adams, M.D., Los Angeles, by invitation.
- 3:00—Strabismus Management—Arthur Jampolsky, M.D., San Francisco.
- 3:20—Electroencephalograms in Cerebral Palsy Cases—Margaret Jones, M.D., Glendale.
- 3:40—Practical Applications of Paper Electrophoresis—Theodore H. Spaet, M.D., San Francisco.
- 4:00—Pediatric Endocrinology—Frank L. Plachte, M.D., Los Angeles.
- 4:20—Western Equine Encephalomyelitis in Infancy—Henry B. Bruyn, M.D., San Francisco, and Edwin H. Lennette, M.D., Berkeley.

THURSDAY, MAY 28

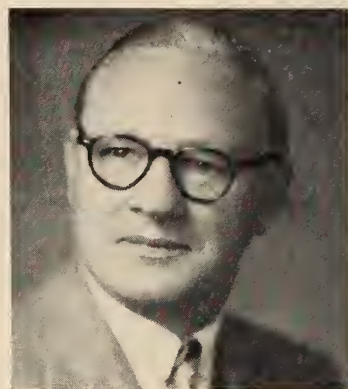
2:00—Renoissance Room, Biltmore Hotel
 Joint Meeting with the Sections on Public Health, General Practice, Pathology and Bacteriology
 Symposium on Encephalitis
 For Program, see Section on Public Health.

PSYCHIATRY AND NEUROLOGY

Chairman.....Cyril B. Courville, M.D., Los Angeles
 Secretary.....A. E. Bennett, M.D., Berkeley
 Assistant Secretary.....Aidan A. Raney, M.D., Los Angeles



CYRIL B. COURVILLE
Chairman



A. E. BENNETT
Secretary

THURSDAY, MAY 28

9:30—Conference Room I, Biltmore Hotel

9:30—**The Physician, the Parent, and the Retarded Child**—M. E. Porter, M.D., Eldridge, and Charles H. Ludwig, M.D., Porterville.

Discussion by Peter Cohen, M.D., San Francisco, and Arthur Parmelee, M.D., Los Angeles.

10:00—**The Symptom of Somnambulism**—Robert L. Jordan, Lt. MC, USNR; and Bernard I. Kahn, Cdr., MC, USN, Oakland, by invitation.

Discussion by Bernard I. Kahn, Cdr., MC, USN, Oakland.

10:30—**Comparison of Flaxedil and D-Tubocurarine for the Prevention of Complications in 1,000 Electric Shock Treatments**—L. G. McKeever, M.D., Oakland.

Discussion by A. E. Bennett, M.D., Berkeley, and Lester H. Margolis, M.D., San Francisco.

11:00—**A Practical Integrated Treatment Program for Mental Hospitals**—Frank F. Tallman, M.D., Sacramento.

Discussion by Douglas G. Campbell, M.D., San Francisco, and Norman Levy, M.D., Beverly Hills.

11:30—**Treatment of Migraine and Tensional Headaches**—Arnold P. Friedman, M.D., Naomi de Sola Pool, M.D., and Theodore J. C. von Storch, M.D., New York, N. Y., by invitation.

11:50—Discussion by Eugene Ziskind, M.D., and Johannes M. Nielsen, M.D., Los Angeles.

THURSDAY, MAY 28

2:00—Conference Room I, Biltmore Hotel

2:00—**Chairman's Address: Anoxia and Brain Diseases**—Cyril B. Courville, M.D., Los Angeles.

2:30—**New Techniques of Physical Therapy for Relaxation of Spasticity**—Milton G. Levine, Ph.D., by invitation; Herman Kabat, M.D.; Margaret Knott, B.S., P.T., by invitation; and Dorothy E. Voss, B.Ed., R.P.T., by invitation, Vallejo.

Discussion by Tracy Jackson Putnam, M.D., Beverly Hills, and Fred B. Moor, M.D., Los Angeles.

3:00—**The Value of Electromyography in Neurology**—A. A. Marinacci, M.D., Los Angeles.

Discussion by Karl O. Von Hagen, M.D., Los Angeles.

3:30—**The Importance of Lumbar Sympathectomy in the Management of Certain Vascular and Visceral Disorders**—R. B. Raney, M.D., Los Angeles.

Discussion.

4:00—**Therapy of Cerebrovascular Disorders—An Evaluation of Present-day Methods of Treatment**—Edison D. Fisher, M.D., Los Angeles.

Discussion by Clarence W. Olsen, M.D., and Karl O. Von Hagen, M.D., Los Angeles.

PUBLIC HEALTH

Chairman John R. Philp, M.D., San Francisco
 Secretary Charles E. Smith, M.D., Berkeley
 Assistant Secretary L. S. Goerke, M.D., Los Angeles



JOHN R. PHILP
Chairman



CHARLES E. SMITH
Secretary

THURSDAY, MAY 28

9:30—Auditorium, Sunkist Building

9:30—Suicide and Public Health—Herbert Bauer, M.D., Woodland.
Discussion.

9:55—Cerebral Palsy—An Approach to the Problem—Peter Cohen, M.D., San Francisco.
Discussion.

10:20—The Public Health Implications of Recent Advances in Diagnosis and Management of Tuberculosis—Reginald H. Smart, M.D., Los Angeles.
Discussion.

10:55—Intermission.

11:00—Problems in Recruitment and Training of Public Health Personnel—Ernest L. Stebbins, M.D., Baltimore, Md., by invitation.
Discussion.

11:30—Chairman's Address—John R. Philp, M.D., San Francisco.

11:40—Business Meeting—Election of Officers.

THURSDAY, MAY 28

2:00—Renoissance Room, Biltmore Hotel

Joint Meeting with Sections on General Practice, Pathology and Bacteriology, and Pediatrics

Symposium

Highlights of the 1952 Encephalitis Outbreak and Plans for the Future

2:00—Problems in Differential Diagnosis of the Acute Disease—Robert H. Kokernot, M.D., D.V.M., M.P.H., by invitation; Henry R. Shinefield, M.D., M.P.H., Sr. Asst. Surg. (R), U.S.P.H.S., by invitation; and W. Allen Longshore, Jr., M.D., M.P.H., Berkeley.

2:15—Identification of Western Equine Encephalomyelitis by Laboratory Methods—Edwin H. Lennette, M.D., Ph.D., Berkeley; and, by invitation, Marjorie C. Nyberg, A.B.; Dolores M. Barghausen, A.B.; Roland Chin, B.S.; Frances U. Fujimoto, A.B.; and Margaret K. Itatani, M.S., Berkeley.

2:30—Some Epidemiological Aspects of the 1952 Outbreak—Arthur C. Hollister, M.D., M.P.H.; and W. Allen Longshore, Jr., M.D., M.P.H., Berkeley; and, by invitation, Ben H. Dean, D.V.M., M.P.H.; and Ida May Stevens, M.A. (P.H.), Berkeley.

2:50—Vector Control Measures of the 1952 Season and Their Implications for the Future—Frank M. Stead, M.S.P.H.(E), San Francisco, and Richard F. Peters, B.S., Berkeley, both by invitation.

3:05—Projected Long-Term Study of Patients From the Neurologic and Psychiatric Points of View—Knox H. Finley, M.D., San Francisco; and W. Max Chapman, M.D., M.P.H., Berkeley.

3:20—Discussion.

3:40—Status of Availability of Gamma Globulin for Prophylaxis of Poliomyelitis—Wilton L. Halverson, M.D., Dr. P.H., San Francisco.

CALIFORNIA CONFERENCE OF LOCAL HEALTH OFFICERS

WEDNESDAY, MAY 27, and
FRIDAY, MAY 29

Auditorium, Sunkist Building
9:30 a.m. to 5:00 p.m.

RADIOLOGY

Chairman.....Robert K. Arbuckle, M.D., Oakland
 Secretary.....Calvin L. Stewart, M.D., San Diego
 Assistant Secretary.....H. R. Morris, M.D., Redlands



ROBERT K. ARBUCKLE
 Chairman



CALVIN L. STEWART
 Secretary

MONDAY, MAY 25

9:30—Conference Room I, Biltmore Hotel

- 9:30—**Aortography—A Discussion of Technique and Presentation of Pre- and Postoperative Cases in Abdominal Aortic Disease**—A. Justin Williams, M.D., and Tom M. Fullenlove, M.D., San Francisco.
- 9:50—**Indications for Angiocardigraphy** — George Jacobson, M.D., Los Angeles, and John M. Clark, M.D., Los Angeles, by invitation.
- 10:10—**Operative Cholangiography**—John H. Gifford, M.D., and Samuel C. Kahlstrom, M.D., Los Angeles.
- 10:30—**Problems of Myelography**—Howard L. Jones, M.D., Palo Alto.
- 10:50—**Roentgen Manifestations of Lymphosarcoma and Other Tumefactive Lesions of the Small Bowel**—Paul H. Deeb, M.D., and Walter L. Stilson, M.D., Los Angeles.
- 11:10—**Radiological Aspects of the Collagen Diseases** —L. Henry Garland, M.D., and M. A. Sisson, M.D., San Francisco.

TUESDAY, MAY 26

9:30—Conference Room I, Biltmore Hotel

- 9:30—**High Voltage Radiography**—Eldon D. Nickel, M.D., San Francisco, by invitation.
- 9:50—**Physical Factors and Early Clinical Results of the 1000 Curie Cobalt⁶⁰ Radiation Unit** —W. E. Costolow, M.D.; Edward M. Cook, Jr., M.D., by invitation; and Roy W. Johnson, M.D., Los Angeles.
- 10:10—**The Future of Therapeutic Radiology**—Justin J. Stein, M.D., Los Angeles.
- 10:30—**Recess — Business Meeting and Election of Officers.**
- 10:40—**Annual Meeting of Pacific Roentgen Society.**

TUESDAY, MAY 26

- 2:00—Renaissance Room, Biltmore Hotel
- Joint Meeting with the Sections on General Surgery and General Medicine
- Symposium on Diseases of the Esophagus**
- For program, see Section on General Surgery.

ADMISSION TO SESSIONS AND EXHIBITS BY REGISTRATION BADGE ONLY

UROLOGY

Chairman.....Roger W. Barnes, M.D., Los Angeles
 Secretary.....James A. May, M.D., San Diego
 Assistant Secretary.....Thomas I. Buckley, M.D., Oakland



ROGER W. BARNES
Chairman



JAMES A. MAY
Secretary

MONDAY, MAY 25

9:30—Auditorium, Sunkist Building

Joint Meeting with Section on Pediatrics

9:30—A Commentary on Ureteral Ectopia in Infancy and Childhood—Report of Eight Cases—Frank R. Morrow, M.D., Hollywood.

Discussion opened by Charles M. Stewart, M.D., Los Angeles.

10:00—Urinary Calculi Before Puberty—Hans H. Zinsser, M.D., Los Angeles.

Discussion opened by Nathan G. Hale, M.D., Sacramento.

10:30—Obstructive Genito-Urinary Lesions in Children—Edgar Burns, M.D., New Orleans, La., by invitation.

Discussion opened by Carl Rusche, M.D., Hollywood.

11:00—Abnormalities of the Scrotal Contents in Infancy and Childhood—Donald A. Charnock, M.D., Los Angeles.

Discussion opened by Harold J. Kay, M.D., Oakland.

11:30—Essential Nocturnal Enuresis Treated with Amphetamine Sulfate—Samuel Roland, M.D., and Frank Hinman, Jr., M.D., San Francisco.

Discussion opened by Arthur H. Hurd, M.D., San Marino.

TUESDAY, MAY 26

9:30—Conference Room 4, Biltmore Hotel

9:30—Unilateral Renal Diseases Associated with Hypertension—Richard A. Peterfy, M.D., Los Angeles.

Discussion opened by Ector LeDuc, M.D., San Diego.

10:00—The Clinical Entity of Hydronephrosis Secondary to Renal Ptosis, Torsion, Intrinsic and Extrinsic Ureteropelvic Obstruction—Charles Pierre Mathe, M.D., San Francisco.

Discussion opened by Irving Wills, M.D., Santa Barbara.

10:30—An Improved Method for the Extraction of Ureteral Stones—B. M. Palmer, M.D., Oakland.

Discussion opened by Ben D. Massey, M.D., Pasadena.

11:00—War Wounds of the Genito-Urinary Tract—Robert M. Boughton, M.D., La Jolla, by invitation.

Discussion opened by Frederick C. Schlumberger, M.D., Beverly Hills.

11:30—Present Day Concepts and Treatment of Genito-Urinary Tuberculosis—Donald C. Malcolm, M.D., Long Beach.

Discussion opened by Ray C. Atkinson, M.D., Oakland.

TUESDAY, MAY 26

2:00—Conference Room 4, Biltmore Hotel

2:00—Chairman's Address: Beyond the Surgeon's Skill—Roger W. Barnes, M.D., Los Angeles.

2:30—The Topical Use of Cortisone in Urology—T. L. Schulte, M.D., San Francisco.

Discussion opened by Donald A. McCannel, M.D., Beverly Hills.

3:00—The Diagnosis of Prostatic Carcinoma—A Comparison of Papanicolaou Stains, Needle

Biopsy, Rectal Examination and Perineal and Transurethral Biopsies — Willard E. Goodwin, M.D.; Joseph J. Kaufman, M.D., by invitation; and Milton Rosenthal, M.D., Los Angeles.

Discussion opened by Bradford W. Young, M.D., San Francisco.

3:30—**Tumors of the Urinary Bladder—Present Day Method of Diagnosis and Treatment**—Gilbert J. Thomas, M.D., Santa Monica.

Discussion opened by Lyle G. Craig, M.D., Pasadena.

4:00—**Effect of Pudendal Nerve Operations on the Neurogenic Bladder**—Ernest Bors, M.D., by invitation; and A. Estin Comarr, M.D., Long Beach.

Discussion opened by Tracy O. Powell, M.D., Los Angeles.

4:30—Business Meeting and Election of Officers.

ADMISSION TO SESSIONS AND EXHIBITS BY REGISTRATION BADGE ONLY

BRING PROPER IDENTIFICATION FOR REGISTRATION

QUALIFICATIONS/REQUIREMENTS FOR REGISTRATION

(a) All M.D.'s with credentials showing that they hold valid license to practice medicine. (Membership card in C.M.A.; county medical society/association; or A.M.A. membership card.)

(b) Medical students will be admitted upon presentation of credentials from their medical schools identifying them as medical students. A membership card of the Student American Medical Association will be sufficient.

(c) Medical secretaries will be admitted upon presentation of a letter from the physician-employer.

(d) Pharmacist mates and other military personnel of a like grade will be admitted upon presentation of a letter requesting their admittance, written by their commanding officer.

(e) Dentists (D.D.S.), doctors of veterinary medicine (D.V.M.), registered nurses (R.N.), x-ray technicians, laboratory technicians, dietitians, allied public health personnel, and others will be admitted provided they have proper identification.

(f) *All questions on admission will be passed on by a member of the Committee on Registration who will be present at the desk.*

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Scientific Exhibits

Main Galeria and North Galeria, Biltmore Hotel

• Main Galeria

Studies of One Thousand Patients with Vascular Headaches—Arnold P. Friedman, M.D., and Theodore J. C. von Storch, M.D., New York, N. Y., both by invitation.

Electronarcosis—Esther Bogen Tietz, M.D.; and Joaquim A. Haenel, M.D., Los Angeles; Gordon A. Dayton, M.D., Arcadia; and Robert E. Litman, M.D., Beverly Hills.

Mechanisms in Conception and Infertility—Edward T. Tyler, M.D., Los Angeles.

Wire Sutures and Ligatures: Points in Technique—James I. Knott, M.D., San Diego.

The Mechanism of Nerve Root Compression by the Posterior Elements in Spondylolisthesis and in Spina Bifida Occulta of the First Sacral Segment—Gerald G. Gill, M.D., and Hugh L. White, M.D., San Francisco; and John G. Manning, M.D., Pasadena.

• North Galeria

Carcinoma of the Lung in X-Ray Surveys—Alfred Goldman, M.D., Beverly Hills; Marvin S. Harris, M.D., Los Angeles, and I. Alfred Breckler, M.D., Beverly Hills.

Modern Antigen Therapy in Chronic Disease—John B. McDonald, M.D.; William H. Davis, M.D., by invitation; Henry K. Oetting, M.D., and Kyle E. Townsend, M.D., Hollywood.

New Techniques for Proctoscopy and Minor Rectal Surgery—Paul C. Blaisdell, M.D., Pasadena.

Aortography and Retroperitoneal Pneumography—W. E. Goodwin, M.D., and R. C. Walter, M.D., and J. J. Kaufman, M.D., Los Angeles; John Getz, M.D., Torrance, by invitation; and Arthur J. Bischoff, M.D., Los Angeles, by invitation.

Organizational Exhibits

Main Galeria, Biltmore Hotel

C.M.A. Public Relations

C.M.A. Blood Bank Commission

C.M.A. Cancer Commission, American Cancer Society, U. S. Food and Drug Administration, State Department of Public Health

C.M.A. Committee on Postgraduate Activities

Los Angeles County Physicians Aid Association

The Student Nurse Recruitment Committee of California

Motion Picture Program

Arthur E. Smith, M.D., D.D.S., Los Angeles, Chairman

Medical Motion Pictures Committee

SURGICAL FILM EXHIBITION

MONDAY, MAY 25

9:00 a.m. to 5:30 p.m., Biltmore Hotel

Galeria Room

9:00—**The Physiologic Basis for the Action of ACTH in Human Beings**—The Armour Laboratories.

9:42—**Carcinoma of the Thyroid**—R. Lee Clark, Jr., M.D., Houston.

10:12—**Early Care of Plastic Surgical Cases—Wounds of the Face and Jaw**—Navy Department.

10:32—**Electroencephalogram**—A. E. Bennett, M.D., and P. T. Cash, M.D., Berkeley.

10:47—**The Mechanism of Nerve Root Compression in Spondylolisthesis as Revealed at Surgery**—Gerald G. Gill, M.D., Hugh L. White, M.D., San Francisco, and John G. Manning, M.D., Pasadena.

11:05—**Total Abdominal Hysterectomy and Bilateral Salpingo-Oophorectomy**—Douglas Donath, M.D., Pasadena.

11:20—**Some Aspects of Accessible Cancers**—Skin—American Medical Association.

11:49—**Fractures: An Introduction**—American College of Surgeons Committee on Fractures and other Traumas.

12:34—**Excision Anal Fissure, Fistulectomy and Hemorrhoidectomy with Caudal Anesthesia**—Neil Swinton, M.D., and Urban Eversole, M.D., Boston.

1:04—**Anterior Resection of Rectosigmoid with Primary Anastomosis**—G. V. Brindley, M.D., Temple, Texas.

1:34—**Keratoplasty**—Ramon Castroviejo, M.D., New York City.

1:50—**Excision of Hyperfunctioning Islet Cell Tumor of Pancreas**—Conrad J. Baumgartner, M.D., Beverly Hills.

- 2:08—Complete Exenteration of the Pelvis—Alexander Brunschwig, M.D., and Virginia K. Pierce, M.D., New York City.
- 2:45—Transverse Incision for Esophageal Pulsion Diverticulum of the Esophagus—Samuel Perzik, M.D., Beverly Hills.
- 3:02—Vagus Resection—Transthoracic Approach—Edward C. Pallette, M.D., Los Angeles.
- 3:17—Surgery of Abdominal Cryptorchidism (Torek Operation)—Harry A. Zide, M.D., Lester A. Riskind, M.D., Beverly Hills, and A. A. Kutzmann, M.D., Los Angeles.
- 3:42—A Case of True Hermaphroditism—Elmer Hess, M.D., and Associates, Erie, Pa.
- 4:10—Wiring of the Thoracic Aortic Aneurysm—J. Norman O'Neill, M.D., Los Angeles.
- 4:20—Plastic Reconstruction of Cleft Palate and Associated Deformities—Arthur E. Smith, M.D., D.D.S., Los Angeles.
- 4:45—Surgical Treatment of Varicose Veins—Henry N. Harkins, M.D., Seattle.
- 5:15—Correction of Cleft Lip—T. J. Blocker, Jr., M.D., Galveston.

TUESDAY, MAY 26

9:00 a.m. to 5:30 p.m., Biltmore Hotel

Galerio Room

- 9:00—Vertigo—Differential Diagnosis—Myron M. Hipskind, M.D., and Samuel Salinger, M.D., Chicago.
- 9:30—The Antibiotics and Terramycin—Alan Wright, M.D., New York, N. Y.
- 9:50—Abdominoperineal Resection for Carcinoma of the Rectum—Richard B. Cattell, M.D., Boston.
- 10:05—One-Stage Right Hemicolectomy—William M. McMillan, M.D., Chicago.
- 10:36—Repair of Ruptured Peptic Ulcer—Philip Thorek, M.D., Chicago.
- 10:52—Prefrontal Lobotomy in Chronic Schizophrenia—A. E. Bennett, M.D., Berkeley.
- 11:13—The Technique of Aortography and Retroperitoneal Pneumography—Willard E. Goodwin, M.D., UCLA School of Medicine.
- 11:33—Hand Surgery—Secondary Repair of Severed Motor Branches of the Median and Ulnar Nerves. Resection of the Scar—Joseph Parker, M.D., Los Angeles.
- 11:50—Familial Periodic Paralysis—Harold N. Perselson, M.D., Los Angeles.
- 12:05—Reconstruction Surgery Following Poliomyelitis—Daniel H. Levinthal, M.D., Beverly Hills.
- 12:35—Treatment of Cysts—Harry M. Seldin, D.D.S., S. Daniel Seldin, D.D.S., and William Rakower, D.D.S., New York City.
- 1:05—Surgical Treatment of Prognathous or Protruding Mandibles—George F. Seeman, D.D.S., Nashville.
- 1:35—Polyps of the Large Intestines—Hilger Perry Jenkins, M.D., Chicago.

- 1:59—Operative Technique in Surgery of the Hand—Joseph H. Boyes, M.D., Los Angeles.
- 2:19—Radical Neck Dissection—Frank H. Lahey, M.D., Boston.
- 2:37—Abdominal Complete Hysterectomy—William F. Mengert, M.D., Dallas, Texas.
- 2:57—Radical Groin Dissection for Malignant Melanoma—Jack M. Farris, M.D., Los Angeles.
- 3:15—Congenital Absence of Vagina—Virgil S. Counsellor, M.D., Rochester, Minn.
- 3:32—A New Method of Lining the Artificially Constructed Vagina with Skin Grafts—E. Eric Larson, M.D., and Arthur E. Smith, M.D., D.D.S., Los Angeles.
- 3:47—Exposure Treatment of Burns in Children—William S. Kiskadden, M.D., and Sanford R. Dietrich, M.D., Los Angeles.
- 4:07—The Mechanism of Nerve Root Compression in Spina Bifida Occulta of the First Sacral Segment as Revealed at Surgery—Gerald G. Gill, M.D., Hugh L. White, M.D., San Francisco, and John G. Manning, M.D., Pasadena.
- 4:25—A New Surgical Approach for the Correction of Congenital Retrusion of the Mandible; Congenital Undeveloped Symphysis: Acquired Deformity of Palate with Marked Protrusion of the Upper Alveolar Arch and Teeth—Marsh Robinson, M.D., D.D.S., Los Angeles.
- 4:55—The Surgical Repair of the Voluminous Ventral Hernia—M. George Henry, M.D., Los Angeles.
- 5:25—Subtotal Colectomy and Ileostomy for Ulcerative Colitis—George Crile, Jr., M.D., Cleveland.

WEDNESDAY, MAY 27

9:00 a.m. to 5:30 p.m., Biltmore Hotel

Galerio Room

- 9:00—Repair of Bladder Hernia—Alfred H. Iason, M.D., Brooklyn.
- 9:15—Supraomohyoid Neck—Grantley W. Taylor, M.D., Boston.
- 9:25—Open Reduction of Tibia and Fibula for Malunion—Edwin F. Cave, M.D., and Carter R. Rowe, M.D., Boston.
- 9:49—Skin Grafting—H. O. McPheeters, M.D., Minneapolis.
- 10:22—Neurosurgery: Facial Neuralgia—Navy Department.
- 10:33—The Technique of Femoral Thromboendarterectomy—Wiley F. Barker, M.D., Veterans Hospital, Los Angeles.
- 10:49—Technique for Reconstruction of Budding Herniated Indonesian Type of Breast—Harold I. Harris, M.D., Los Angeles.
- 11:06—Differential Diagnosis of Lesions of the Cervix—A. M. Hansen, M.D., Los Angeles.
- 11:31—Repair of Mandibular Defects of Jaw—Henry S. Patton, M.D., Oakland.
- 12:01—Colotomy for Polyp—William H. Daniel, M.D., and George C. Tyler, M.D., Los Angeles.

- 12:16—Simple Vaginal Hysterectomy, Heaney Technique—Edward D. Allen, M.D., and L. Peterson, M.D., Chicago.
- 12:44—Surgical Preparation of the Mouth for Immediate Dentures—Ralston I. Lewis, M.D., D.D.S., Chicago.
- 1:02—Surgical Correction of Unilateral Prognathism—Leonard Z. Lyon, D.D.S., Los Angeles.
- 1:27—Hypertension Due to Pheochromocytoma—Reginald H. Smithwick, M.D., Boston.
- 1:40—Total Pneumonectomy for Carcinoma of the Right Upper Lobe—Lyman Brewer III, M.D., Los Angeles.
- 2:03—Augmentation Mammoplasty by Lipo Transplant—H. O. Barnes, M.D., Los Angeles.
- 2:18—Subtotal Colectomy and Ileostomy for Ulcerative Colitis—George Crile, Jr., M.D., Cleveland.
- 2:34—Radical Operation for Cancer of the Cervix—Joe Vincent Meigs, M.D., Boston.
- 3:05—Surgical Anatomy of the Parotid Gland—Conrad J. Baumgartner, M.D., Beverly Hills.
- 3:25—Recent Modifications of Convulsive Shock Therapy—A. E. Bennett, M.D., and P. T. Cash, M.D., Berkeley.
- 3:45—Oral Surgical Procedures—Samuel A. Brandon, D.D.S., Portland.
- 4:30—Adult Tonsillectomies Using Sodium Pentothal, Curare, Pontocaine and Novocain as the Anesthetic—Fordyce Johnson, M.D., Pasadena.
- 4:50—Radical Neck Dissection for Carcinoma of the Mouth—Samuel Kaplan, M.D., Beverly Hills.
- 5:02—The Repair of the Unilateral Cleft Lip by the Stencil Method—Charles W. Tennison, M.D., San Antonio.
- 5:12—Reconstruction Nasal Half Upper Lid—Wendell L. Hughes, M.D., Hempstead, N. Y.

WEDNESDAY EVENING, MAY 27

7:00 p.m. to 11:00 p.m., Biltmore Hotel

Galeria Room

- 7:00—Sciatic Pain and the Intervertebral Disc—American Medical Association.
- 7:26—Resection of the Right Colon for Carcinoma—Arthur W. Allen, M.D., Boston.
- 7:39—Delivery of Quadruplets—John C. Ullery, M.D., Philadelphia.
- 8:08—Transtrochanteric Osteotomy of the Femur for Non-Union of the Neck—Stanley Haft, M.D., Los Angeles.
- 8:23—Thoracolumbar Sympathectomy with Rib Resection—J. Norman O'Neill, M.D., Los Angeles.
- 8:40—Surgical Treatment of Pituitary Tumors—C. Hunter Shelden, M.D., Pasadena.
- 9:00—Fascia Latal Transplant Repair of Inguinal Hernia—Louis C. Bennett, M.D., Los Angeles.
- 9:15—New Operation for Equinus Deformity: Osteotomy and Bone Graft to Os Calcis—Hugh Toland Jones, M.D., and Arthur E. Smith, M.D., D.D.S., Los Angeles.

- 9:30—Total Hysterectomy—William H. Brownfield, M.D., Los Angeles.
- 9:45—The Story of Lucy—Henry H. Kessler, M.D., Newark.
- 10:03—Treatment of Burns and Cutaneous Abrasions—M. Gonzalez Ulloa, M.D., Mexico City.
- 10:33—Special Problems in the Management of Peptic Ulcer—Wyeth Laboratories.

THURSDAY, MAY 28

9:00 a.m. to 4:00 p.m., Biltmore Hotel

Galeria Room

- 9:00—Correction of Facial Paralysis by Means of Muscle Transplant: Comparison with Results Using Fascia Transplant—Neal Owens, M.D., New Orleans.
- 9:40—Oral Cancer: The Problem of Early Diagnosis—American Cancer Society.
- 10:00—Plastic Reconstruction of the Burned Patient—Arthur E. Smith, M.D., D.D.S., Los Angeles.
- 10:45—Resistive Exercise Techniques Employed in the Treatment of Respirator Poliomyelitis Patients—O. Leonard Huddleston, M.D., Santa Monica.
- 11:15—Diagnosis of Poliomyelitis—National Foundation for Infantile Paralysis.
- 11:35—Having a Baby—J. Harold Cantarow, M.D., Beverly Hills.
- 11:50—Repair of Postoperative Ventral Hernia with Suraloy Stainless Steel Mesh—Kenneth C. Sawyer, M.D., and F. R. Spencer, M.D., Denver.
- 12:07—Repair of Vesicovaginal Fistula—Roger W. Barnes, M.D., Los Angeles.
- 12:22—The Surgical Preparation of the Mouth for Dentures—V. H. Kazanjian, M.D., Boston.
- 12:37—Hand Reconstruction—William H. Frackelton, M.D., Milwaukee.
- 12:54—Surgical Repair of Complete Uterine Prolapse—Edward Allen, M.D., Chicago.
- 1:19—Subtotal Gastrectomy—Joel W. Baker, M.D., Seattle.
- 1:44—Pulmonary Valvulotomy—John C. Jones, M.D., Los Angeles.
- 2:05—Reconstruction of the Lower End of the Femur with Use of Acrylic Prosthesis—George Kraft, M.D., and Daniel H. Levinthal, M.D., Beverly Hills.
- 2:20—Primary Hyperparathyroidism Due to Parathyroid Adenoma: Diagnosis and Surgical Treatment—Joel W. Baker, M.D., and Randolph P. Pillow, M.D., Seattle.
- 2:46—The Pterygopalatine Injection for Blocking the Maxillary Nerve—Joseph Grodjesk, D.D.S., and Leonard Szerlip, D.D.S., Jersey City.
- 3:11—Splenectomy in the Treatment of Hypersplenism—Robert M. Zollinger, M.D., and E. H. Ellison, M.D., Columbus, Ohio.
- 3:44—General Anesthesia in Oral Surgery—George L. Robinson, M.D., and D. E. Walters, D.D.S., Waterloo, Iowa.

WOMAN'S AUXILIARY

to the

CALIFORNIA MEDICAL ASSOCIATION

Twenty-Third Annual Convention, May 24 to 26, 1953

Headquarters: Biltmore Hotel, Los Angeles



MRS. RALEIGH W. BURLINGAME
President



MRS. CARL BURKLAND
President-elect

Convention Chairman: MRS. J. JAMES DUFFY

REGISTRATION

Sunday, May 24—9 a.m. to 4:00 p.m.
Monday, May 25—8:30 a.m. to 4:00 p.m.
Tuesday, May 26—8:30 a.m. to 12 noon.

SUNDAY, MAY 24

8:00 a.m.—Executive Committee meeting, President's Suite, Biltmore Hotel.
10:00 a.m.—Pre-Convention Board meeting, Conference Room 8, Biltmore Hotel.

MONDAY, MAY 25

9:30 a.m.—First General Session of the Twenty-third Annual Convention, Alexandria Hotel, 210 West Fifth Street. Mrs. Raleigh W. Burlingame, President, presiding.
1:30 p.m.—Opening Session of the California Medical Association. Report of the year's work of the Woman's Auxiliary by the President, Mrs. Raleigh W. Burlingame. All Auxiliary members and doctors' wives are invited to attend. Renaissance Room, Biltmore Hotel.

4:00-6:00 p.m.—Reception, honoring Mrs. Lewis A. Alesen, wife of the President of the California Medical Association. All doctors' wives and their husbands are invited. Rendezvous Room, Biltmore Hotel.

7:30 p.m.—California Medical Association dinner and dance, honoring the President, Dr. Lewis A. Alesen. Biltmore Bowl, Biltmore Hotel. Formal dress optional.

TUESDAY, MAY 26

9:00 a.m.—Second General Session of the Twenty-third Annual Convention, Ballroom, Alexandria Hotel. Mrs. Raleigh W. Burlingame, president, presiding.
1:00 p.m.—Luncheon, honoring Mrs. Raleigh W. Burlingame, Mrs. Carl Burkland, the State Advisory Board and past state presidents. Embassy Room, Ambassador Hotel, 3400 Wilshire Boulevard.
3:00 p.m.—Post-Convention Board meeting. Rose Room, Ambassador Hotel, Mrs. Carl Burkland presiding.

ENTERTAINMENT

There will be tickets available for live TV and radio broadcasts for members and guests. A trip to the Huntington Library or a garden tour is also interesting. Inquire at table marked *Entertainment*.

Technical Exhibits

The technical exhibitors will be housed this year in the Ballroom, the Ballroom Foyer and the Music Room. There will be 95 exhibitors, displaying the newest products and services for the benefit of those attending the meeting.

Exhibits have been arranged to allow a maximum of space for circulation and for visiting with the exhibitors.

All physicians and their registered assistants are welcome in the exhibit areas and it is hoped that all will take advantage of this opportunity to refresh themselves on everything

that is new and good in the science and art of medical practice. Only at annual meetings is such a display available.

Under the five-day meeting schedule in use this year for the first time, ample time will be available for visiting the exhibits. Please take this time to visit with the exhibitors, to learn about new items for yourself and to show your exhibitors that you appreciate their substantial contribution to your annual session.

A list of exhibitors and their displays is given below.

	Room and Booth No.		Room and Booth No.
ABBOTT LABORATORIES North Chicago, Illinois	Ballroom Foyer—12	and sashes. Manual: simple, direct, cheerful, authoritative—helps parents prepare for coming baby. Film strips, slides and outlines for parents' classes.	
Abbott will present an animated exhibit on DESOXYN Hydrochloride (Methamphetamine-Hydrochloride, Abbott) showing the use of the product in the management of certain cases of obesity. In the cast of characters are a green snake, Temptation, and a wavering dieter. DESOXYN, in addition to curbing the appetite, imparts a feeling of well-being and increases mental and physical activity. DESOXYN also is indicated as an adjunct in convalescence and prolonged illness. Because DESOXYN is more potent than other sympathomimetic amines, smaller dosages produce the desired central effect—and with a minimum of side effects.		THE BAKER LABORATORIES, Inc. Cleveland, Ohio	Ballroom Foyer—14
AMES COMPANY, Inc. Elkhart, Indiana	Ballroom—29	Baker's Modified Milk (Carbohydrate added) and Varamel (no Carbohydrate added) are made especially for infant feeding, from Grade A milk (U. S. Public Health Service Milk Code), which has been modified by the replacement of the milk fat with animal and vegetable oils and by the addition of vitamins and iron.	
APAMIDE—prescription analgesic—antipyretic (N-acetyl-p-aminophenol) of rapid and prolonged action.		BARNES-HIND LABORATORIES, Inc. San Francisco	Ballroom—25
APROMAL—non-narcotic, non-barbiturate sedative (acetylcarbromal) plus N-acetyl-p-aminophenol.		Barnes-Hind Laboratories, Inc., is pleased to present our new product TRANQUINAL, which is a combination of Scopolamine-Aminoxide Hydrobromide (detoxified Scopolamine) and two open chain ureides. This combination is indicated wherever sedation is desired and has the advantage of no side or after effects. This drug also has the advantage of rapid absorption and detoxification and may be used with complete safety.	
DECHOLIN SODIUM is foremost in combating serum-sickness penicillin reactions. Dramatic patient-relief has been noted within a few hours after intravenous DECHOLIN SODIUM, followed by adequate oral DECHOLIN.		TAKON will also be presented. This is a new waterproofing agent which gives complete protection and is non-irritating.	
AYERST, McKENNA & HARRISON, Ltd. New York, New York	Ballroom—46	May we have the pleasure of seeing you at our Booth 25.	
You are cordially invited to visit Booth 46 to relax and discuss the Ayerst line of prescription specialties with our representatives. Literature and information relative to "Premarin" may be had at the booth. Representatives will be glad to discuss new developments with you, answer any questions, or have you just visit. Here is an opportunity to become better acquainted with us.		DON BAXTER, Inc. Glendale	Ballroom Foyer—6
BABY DEVELOPMENT CLINIC Chicago, Illinois	Ballroom—41	Well informed Baxter representatives will be available to discuss several of the newest developments in parenteral and tubal nutrition. Featured at the Baxter exhibit will be Calorigen 1000, the first heat-sterilized nutrient solution commercially available for nasogastric tubal feeding; Iso-lyte (Balanced Electrolyte Solutions) with and without dextrose; Hyprotigen with 0.15% Potassium Chloride; Dextrathyl, 5% alcohol and 25% dextrose; and Kaladex, 0.2% Potassium Chloride in 5% dextrose. You'll also see the remarkable new Pharmaseal 8-French plastic feeding tube, for greater patient comfort.	
To aid maternity patients demonstration samples and literature concerning carefully selected supportive brassieres			

BECTON, DICKINSON & CO.

Music Room—75

Rutherford, New Jersey

Becton, Dickinson and Company, Rutherford, New Jersey, cordially invite you to visit their booth and discuss with the representatives the advantages of the new Men's and Women's full-footed, nylon elastic hosiery. Also on display will be our general line of Hypodermic Syringes, Needles, Clinical Thermometers, Ace and Asepto Bandages.

BEECH-NUT PACKING COMPANY

Music Room—96

Conochohorie, New York

The Beech-Nut Packing Company invites you to visit their booth. The Nutrition Staff will be on hand to answer any questions you may have regarding the use, ingredients and value of the STRAINED AND JUNIOR BABY FOODS.

ERNST BISCHOFF COMPANY

Bollroom—28

Ivoryton, Connecticut

Ernst Bischoff Company will exhibit for the first time at this California Medical Association convention. They will feature Aminet Suppositories, Anayodin, Diatussin, Bi-Co-Tussin, and My-B-Den. Information and reprints on these products will be available at the booth.

THE BORDEN FOOD PRODUCTS COMPANY

Son Francisco

Bollroom—27

You are cordially invited to our booth for a refreshing cup of Borden's pure coffee with that good old-fashion flavor. Borden's famous Elsie and the lively baby doll will be there to encourage your smiles. Trained personnel will be available to answer questions and supply you with helpful printed material.

BOYLE & COMPANY

Music Room—78

Los Angeles

Boyle & Company will feature Boyle Pre-Natals, Boyle Hematinics, Opidice, Deimal, Friva and other products Council Accepted.

A. M. BROOKS COMPANY

Music Room—72

Los Angeles

We shall once again be happy to have you visit us at Booth 72, where we shall exhibit the following electro-medical equipment: the most up-to-date and outstanding diathermy in the nation, the Raytheon MICROTHERM, microwave diathermy. Also exhibiting the Edin, ink-writing Electrocardiograph—Ballistodyne, Ballistocardiograph—AMBCO Hearing Amplifier—Metabasal units, (portable) Ultraviolet and Infrared lamps—vibrators, and other accessories.

BURROUGHS WELLCOME & CO., Inc.

Music Room—88

Tuckohoe, New York

'AEROSPORIN'® OTIC SOLUTION STERILE—has a wide anti-bacterial action, and is especially effective against *Ps. aeruginosa*. It consists of 'Aerosporin'® Sulfate Polymyxin B Sulfate in acidified propylene glycol. It is hygroscopic, and has a low surface tension.

'POLYSPORIN'® POLYMYXIN B—BACITRACIN OINTMENT—has a broad antibacterial action. Used for treating pyogenic conditions of the eye and skin, and infected lesions. Also for preventing infections in clean wounds and burns.

BUSINESS AND MEDICAL REGISTRY

Bollroom—50

Los Angeles

Business and Medical Registry through long association with the medical profession in California and other western states is qualified to discuss affiliations for the physician and also to submit data on available candidates for consideration where appointments are to be made. A welcome awaits in Booth 50.

CAMEL CIGARETTES

Music Room—64, 65

New York, New York

CAMEL Cigarettes will mark your initials on an attractive plastic cigarette case filled with a package of those mild, flavorful CAMELS. This exhibit features a display of some of the tobaccos used in blending this famous cigarette which leads all other brands by many billions.

S. H. CAMP AND COMPANY

Bollroom—31

Jackson, Michigan

S. H. Camp and Company, Booth 31, cordially invites you to visit their exhibit to see the Plastica Orthopraxic Appliances of tomorrow. The Plastica Cervical, Taylor and Goldthwaite braces are integrally formed of plastic. Functionally correct anatomical designs insure improved wearing qualities, rigid support and they are completely washable and all at less cost to the patient than conventional steel braces. Representatives in attendance will be glad to answer questions about Plastica braces and other Camp Supports.

ELDON H. CANRIGHT COMPANY, Inc.

Music Room—81

Glendale

You are cordially invited to visit our booth where courteous and well informed personnel will be available to discuss our products.

CARNATION COMPANY

Bollroom—49

Los Angeles

You are cordially invited to visit the Carnation Company Booth 49 where you will see an attractive Trans-Illumination of the Carnation Experimental Farm near Seattle, Washington. The various uses of Carnation Evaporated Milk for infant feeding, child feeding and general diet purposes will be explained. Valuable and interesting literature will be available for you.

WARNER CHILCOTT LABORATORIES

Music Room—70

New York, New York

Two new cardiovascular agents will be featured at the Warner Chilcott booth. Medical representatives and research personnel will welcome an opportunity to discuss Methium, an effective oral hypotensive, and Peritrate, a vasodilator for prophylaxis in angina pectoris.

Gelusil, long known for acid control in peptic ulcer without constipation, will also be on display.

CIBA PHARMACEUTICAL PRODUCTS, Inc.

Summit, New Jersey

Ballroom Foyer—2

Ciba's exhibit (Booth 2) features two new agents for more effective management of hypertensive disorders—REGITINE, for simple and accurate diagnosis of hypertension produced by pheochromocytoma—APRESOLINE, an agent of choice for gradual sustained lowering of blood pressure.

You are invited to visit the Ciba booth for literature on APRESOLINE and REGITINE.

THE COCA-COLA COMPANY

Atlanta, Georgia

Music Room—69

Ice cold Coca-Cola served through the cooperation and courtesy of the Coca-Cola Bottling Company of Los Angeles and The Coca-Cola Company.

CONTINENTAL MEDICAL BUREAU

Los Angeles

Ballroom—26

Continental Medical Bureau, Agency, Los Angeles, will have representatives in Booth 26. This is the oldest medical bureau in the state and their many contacts assure you of prompt service if you wish a physician-surgeon in your offices, a specialist for a group or if you wish to relocate. Locations and areas checked for suitability. All services confidential. Drop by and say hello at Booth 26.

CUTTER LABORATORIES

Berkeley

Ballroom Foyer—3

Cutter Laboratories, Booth 3, will display "Allydrox" adsorbed toxoids and combined vaccines, as well as the Human Blood Fractions—Hypertussis, Immune Serum Globulin and the exclusive Albumin Shock Kit.

Also on exhibit will be the complete Cutter Saftiflask Solutions line, featuring the Saftitab Stopper—safer because it's solid, yet with open stopper convenience. The new built-in Safticlamp on IV, blood and plasma infusion equipment will be demonstrated. At no extra cost this revolutionary new clamp provides precision control of fluid with just one hand. The Safticlamp is on all Cutter, all-plastic, expendable sets which are designed for safe pressure administration.

F. A. DAVIS COMPANY

Philadelphio, Pennsylvonio

Music Room—90

The new Loose Leaf Cyclopedia of Medicine, Surgery and Specialties was just completed last year. See this outstanding work and the first annual revision now in preparation. Many textbooks are also on display including Judovich & Bates, *Pain Syndromes*; Murphy, *Medical Emergencies*; Stroud, *Cardiovascular Disease*; Lederer, *Diseases of the Ear, Nose and Throat*; Pillmore, *Clinical Radiology*.

DESITIN CHEMICAL COMPANY

Providence, Rhode Island

Music Room—61

DESITIN Ointment: The pioneer in external cod liver oil therapy. Indications: diaper rash, slow healing wounds, burns of all degrees, lacerations, hemorrhoids and fissures.

DESITIN Powder: a unique, dainty medicinal powder saturated with cod liver oil.

DESITIN Hemorrhoidal Suppositories with Cod Liver Oil: coats anorectal area with soothing, lubricating cod liver oil, gives prompt relief of pain, allays itching.

DESITIN Lotion: the original cod liver oil lotion, soothing, protective, mildly astringent and healing, in non-specific dermatitis, pruritus, poison ivy, etc.

DEVEREUX SCHOOLS

Sonto Borboro

Music Room—84

Large color photos of the school campus and leather, ceramic and jewelry items made by the children are featured in the Devereux Schools exhibit.

The Devereux Foundation offers "tailor made" education for children who are unable to adjust themselves in the public schools—either because of emotional, academic or intellectual problems.

In a boarding school setting, the Devereux Schools offer the finest educational and clinical facilities plus an outstanding staff of specialists to assist physicians to meet the needs of their school age patients who are failing in their home communities.

THE DIETENE COMPANY

Minneapolis, Minnesota

Ballroom—48

Visit our exhibit and examine the Free Diet Service for physicians. The diets are nutritionally well-balanced, easy to follow and made to appear as if they were typed in your office.

MERITENE, the economical and palatable whole protein supplement, and DIETENE, the "Council Accepted" reducing supplement, will be on display.

DOHO CHEMICAL CORPORATION

New York, New York

Music Room—94

Doho Chemical Corporation is pleased to exhibit AURALGAN, the ear medication for the relief of pain in Otitis Media and removal of Cerumen; RHINALGAN, the nasal decongestant which is free from systemic or circulatory effect and equally safe to use on infants as well as the aged; and the NEW OTOSMOSAN, the effective, non-toxic ear medication which is Fungicidal and Bactericidal (Gram negative-Gram positive) in the suppurative and aural dermatomycotic ears. Mallon Chemical Corporation, subsidiary of the Doho Chemical Corporation, is also featuring RECTALGAN, the liquid topical anesthesia, also Bactericidal and Fungicidal for control of secondary invaders, particularly recommended for treatment of mold infections (monilia) occurring after antibiotic therapy; also for relief of pain and discomfort in hemorrhoids, pruritus and perineal suturing.

ENCYCLOPAEDIA BRITANNICA, Inc.

Chicago, Illinois

Music Room—86

For promotion of Encyclopaedia Britannica Publications.

ENDO PRODUCTS, Inc.

Richmond Hill, New York

Music Room—77

Endo Products takes this occasion to welcome its many friends to our exhibit, where we will feature several of our many Council-Accepted products. We will have trained personnel on hand to discuss CUMERTILIN TABLETS and INJECTABLE, the new oral and injectable mercurial diuretics, as well as many of our other products which have been favorably received by the medical profession.

C. B. FLEET COMPANY, Inc.
Lynchburg, Virginia

Ballroom Foyer—14

C. B. Fleet Co., Inc., cordially invites you to stop at Booth 14 to see the exhibit of Phospho-Soda (Fleet). Phospho-Soda (Fleet) is a solution containing in each 100 cc. sodium biphosphate 48 gm. and sodium phosphate 18 gm.

Phospho-Soda (Fleet) over the years has won discriminating preference of physicians because of its controlled action . . . its freedom from undesirable side effect—and its ease of administration.

There is only ONE Phospho-Soda (Fleet).

GEIGY PHARMACEUTICALS
New York, New York

Music Room—83

The Geigy exhibit will feature BUTAZOLIDIN, the totally new, orally effective compound with an exceptionally broad field of usefulness in arthritis and allied disorders. Clinically, BUTAZOLIDIN (brand of phenylbutazone) brings quick relief and often functional improvement to the majority of patients with rheumatoid arthritis, osteoarthritis, spondylitis, gout, arthritis with psoriasis, peritendinitis, fibrositis, and other painful musculoskeletal disorders. Ask for the brochure "Essential Clinical Data on BUTAZOLIDIN," and other literature which will be made available. Also on display will be Council-Accepted TROMEXAN, a new, safer, faster-acting, less cumulative, oral anticoagulant; EURAX Cream, a new, long-acting, non-sensitizing, antipruritic and scabicide; and PANPARNIT, indicated for symptomatic relief for Parkinson's Disease.

GENERAL ELECTRIC COMPANY, X-Ray Department

Milwaukee, Wisconsin

Music Room—97

A new Direct Writing Electrocardiograph and a new Short Wave Diathermy Unit as well as the Maxicon Diagnostic X-Ray Unit which is a member of the well-known building block line of diagnostic x-ray equipment will be seen at our booth.

GERBER PRODUCTS COMPANY

Fremont, Michigan

Music Room—85

Gerber's Concentrated Meat Base Formula is NEW. It is prepared to replace milk in the allergic infant's diet. Its use will help assure a well-fed and happy baby.

Your Gerber detailman looks forward to showing you this important infant food. He also invites you to examine the COMPLETE line of Strained and Junior foods including all-meat baby foods and four vitamin-enriched cereals. Up-to-date editions of Gerber's baby-care booklets are available for your office. . . . Complimentary, of course.

HARROWER LABORATORY, Inc.

Glendale

Ballroom—54

The Harrower technical exhibit will present Proluse Complex Tablets and Liquid, and Isocrin. These three products contain diacetylhydroxyphenylisatin, recently identified by Harrower research as the active laxative principle of California prunes. Pharmacological and clinical data are featured. Reprints, samples and literature will be supplied.

H. J. HEINZ COMPANY

Pittsburgh, Pennsylvania

Ballroom—56

WHAT'S NEW AT THE HEINZ EXHIBIT? 1. Heinz Strained Orange Juice, Pre-cooked Rice Cereal, Strained Banana Custard Pudding, Junior Baked Beans. 2. Literature for your patients: "Strained Foods for Your Baby's Diet," "Junior Foods for Older Babies," "Recipe Magic Using Heinz Strained and Junior Foods." "Facts About Foods" includes caloric values and analyses of carbohydrates, protein, fat, calcium, sodium, iron and vitamins. 3. For office use: "Baby Gift Folders," "Nutritional Data," "Nutritional Observatory."

HOFFMANN-LA ROCHE, Inc.

Nutley, New Jersey

Ballroom Foyer—21

Be sure to ask about the new Gantrisin products when you visit the Roche display: GANTRICILLIN tablets—Gantrisin plus penicillin—for oral antibacterial therapy; and GANTRISIN NASAL SOLUTION—Gantrisin plus phenylephrine—to treat infection and relieve congestion.

Representatives at the Roche booth will be glad to answer questions concerning other Roche products which may be of interest to physicians.

HOLLAND-RANTOS COMPANY, Inc.

New York, New York

Music Room—71

You are cordially invited to inspect the Holland-Rantos display featuring: 1. Time-tested KOROMEX Diaphragms, Jelly, Cream, etc., *for dependable conception control*; 2. NYLMERATE Jelly and Solution Concentrate for effective low-cost treatment of trichomoniasis, moniliasis and non-specific bacterial vaginitis. Representatives will welcome the opportunity to talk with you about H-R products of special interest to you.

IRWIN, NEISLER & COMPANY

Decatur, Illinois

Music Room—66

RESEARCH TO SERVE YOUR PRACTICE. We of Irwin, Neisler & Company believe that new drugs should not only pass the most rigid experimental and clinical tests, but should also *prove practical for the day to day practice of medicine*. At Booth 66 you will find new and improved practice-proven products for the management of cardiovascular disease, heart disease, bronchial asthma, obesity and other conditions with which you are confronted daily. Won't you stop by?

LANTEEN MEDICAL LABORATORIES, Inc.

Evanston, Illinois

Music Room—76

Lanteen Medical Laboratories, Inc., extend a cordial invitation to visit their Booth 76. The well-known line of Lanteen Gynecic Specialties will be available for discussion.

LEDERLE LABORATORIES

New York, New York

Music Room—95

You are cordially invited to visit our exhibit in Booth 95 where you will find representatives who are prepared to give you the latest information on LEDERLE products.

LIEBEL-FLARSHEIM COMPANY
Cincinnati, Ohio

Ballroom Foyer—23

Kindly visit this Liebel-Flarsheim booth and see the latest and finest in Short Wave Diathermy and Office Bovie Electro Surgical equipment.

ELI LILLY AND COMPANY
Indianapolis, Indiana

Ballroom—38

You are cordially invited to visit the Lilly exhibit located in Booth 38. New antibiotics, cardiac drugs, and anti-histamines are featured in the display. Lilly medical service representatives will welcome your questions about these and other recent therapeutic developments.

J. B. LIPPINCOTT COMPANY
Philadelphia, Pennsylvania

Ballroom—51

J. B. Lippincott Company presents, for your approval, a display of professional books and journals geared to the latest and most important trends in current medicine and surgery. These publications, written and edited by men active in clinical fields and teaching, are a continuation of more than 100 years of traditionally significant publishing.

LOV-É BRASSIERE COMPANY
Hollywood

Ballroom Foyer—19

We invite you to inspect our highly specialized line of therapeutic breast supports which enable the physician to prescribe remedial support for specific breast conditions. Each Lov-é brassiere is custom-fitted inch-by-inch to your patient's personal measurements . . . and in exact accordance with your instructions. Special brassieres for prenatal, postpartum, atrophic, hypertrophic and mastectomy. Lov-é Corrective Brassieres are available in leading department stores and corset shops throughout the West. Our representative will be very happy to answer any questions.

M & R LABORATORIES
Columbus, Ohio

Music Room—74

Your SIMILAC representatives are happy to take part in this meeting. They are pleased to have the opportunity to discuss with you the role of SIMILAC in infant feeding. They have for you the latest Pediatric Research Conference Reports. Also available are current reprints of pediatric nutritional interest.

MARLYN COMPANY, Inc.
Los Angeles

Music Room—91

Marlyn Co. Inc. cordially invites you to visit its exhibit which will feature Test-Estrin and other Marlyn specialties. Our representatives will be in attendance to provide information relative to our products, and any descriptive literature which you may desire.

THE S. E. MASSENGILL COMPANY
Bristol, Tennessee

Music Room—80

The Massengill exhibit will display Aminodrox, the tablet that makes it feasible to use oral aminophylline therapy in bronchial and cardiac asthma or angina pectoris. Other specialties will also be on display.

McNEIL LABORATORIES, Inc.
Philadelphia, Pennsylvania

Ballroom—36

Members of the California Medical Association are cordially invited to visit our Booth 36. Mr. Hugh A. Harley in charge. Products to be featured are Butisol Sodium, Butisol-Belladonna, Syndrox Hydrochloride, Syntil, Cinbisal and Sustinex.

MEAD JOHNSON & COMPANY
Evansville, Indiana

Ballroom Foyer—4

Mead Johnson & Company, Evansville, Indiana, Booth 4, will feature the change in the formulation of Dextri-Maltose, the dried carbohydrate, designed especially for use in infant formulas. In addition to Natalins, small capsules containing vitamins and minerals, designed particularly for use in pregnancy and lactation; the Vi-Sols and four Pabulum Cereals will be on display. Representatives in attendance will be glad to furnish information regarding the above products.

MEDCO PRODUCTS COMPANY
Tulsa, Oklahoma

Music Room—92

The MEDCOLATOR Stimulator, for the stimulation of innervated muscle or muscle groups ancillary to treatment by massage, is a low volt generator that will generate plenty of your interest. Electrical muscle stimulation is a valuable form of rehabilitation therapy. Be sure to visit our booth for a personal demonstration.

THE MEDICAL CENTER AGENCY
San Francisco

Ballroom—30

The Medical Center Agency cordially invites you to visit their booth. Experienced personnel will be in attendance.

Attractive opportunities for General Practitioners and Specialists available with Clinic Groups, individual associations, hospital assignments and locations. Complete information on qualified General Practitioners and Specialists desiring affiliations. Interviews strictly confidential.

We also supply experienced office personnel.

THE MEDICAL PROTECTIVE COMPANY

Fort Wayne, Indiana

Ballroom Foyer—15

Specializing exclusively in Professional Protection since 1899, The Medical Protective Company provides representation at Booth 15, familiar with all the complexities of professional liability by special training and long experience. Answers to problems arising out of the Doctor-Patient relationship are available for the asking.

MERCK & CO, Inc.

Ballroom Foyer—16

Rahway, New Jersey

MERCK & Co., INC., is featuring CORTONE, HYDROCORTONE, NALLINE, and other medicinal preparations.

CORTONE has produced striking clinical improvement in rheumatoid arthritis and related rheumatic diseases; bronchial asthma; eye diseases including non-specific iritis, iridocyclitis and uveitis; and skin diseases including cases secondary to drug reactions.

HYDROCORTONE is recommended for injection into the articular cavity of a rheumatoid or osteoarthritic joint.

NALLINE is a specific antidote in the treatment of over-

dosage with morphine and its derivatives, as well as meperidine and methadone.

Representatives at the Merck booth will be glad to provide information on these and other medicinal preparations such as Antibiotics, NEO-ANTERGAN, URECHOLINE, and VINETHENE.

THE WM. S. MERRELL COMPANY **Bollroom—58**
Cincinnati, Ohio

For prompt, effective and COMFORTABLE relaxation of gastrointestinal smooth muscle spasm, Merrell presents BENTYL Hydrochloride.

BENTYL is a high milligram potency non-narcotic anti-spasmodic with two-fold musculotropic and neurotropic action. Bentyl is therapeutically effective in functional gastrointestinal disorders without atropine-like side actions.

BENTYL is particularly suited for prolonged administration with habituation or increased tolerance.

MILLER SURGICAL COMPANY **Music Room—68**
Chicago, Illinois

Sole manufacturers of Dr. Rudolph Gorsch's illuminated stainless steel rectal scopes. Proctologists, as well as other physicians interested in this field, will find it worth while to take a look. Other items of interest include their Electro-Scalpel which provides a unit for office, hospital and out-call use. It is thoroughly practical for all minor and light surgery and comes complete with monopolar electrodes for cutting, coagulating, desiccating, dehydrating and fulgurating in general work.

C. V. MOSBY COMPANY **Bollroom Foyer—1**
San Francisco

You will find books on all subjects of interest to you at the Mosby Co. Booth 1. Come and look over whatever of these books you may care to. A company representative will be in attendance to assist you in any way that he can.

THE NATIONAL DRUG COMPANY **Bollroom—52**
Philadelphia, Pennsylvania

The National Drug Company cordially invites you to visit their booth. On display you will find AVC Improved and Resion. AVC Improved is effective against an extremely wide range of vaginal tract infections. Resion offers a completely new approach in the treatment of diarrhea, food poisoning and the toxicity and irritation characteristic of bacterial gastrointestinal tract infections; also for controlling the nausea and vomiting of pregnancy.

THE NESTLE COMPANY, Inc. **Bollroom—45**
White Plains, New York

You are cordially invited to visit the Nestle Booth 45 for information on Arobon, the antidiarrheal product, prepared from specially processed Carob flour. Literature and information on Nestle's milk products for infant feeding also will be available.

THE NETTLESHIP COMPANY **Bollroom Foyer—7**
Los Angeles

Information on insurance problems of the doctor will be available to attending physicians.

The Nettleship Company has specialized in the field of the professional man for more than a quarter of a century, presently administering the official malpractice insurance programs of six County Medical Associations. It likewise serves nine professional organizations as administrators of their Group Accident and Sickness insurance programs. Many members of the profession have found it desirable to avail themselves of the services of the general insurance and life insurance departments of The Nettleship Company, due to the specialized attention given to the doctor's insurance needs.

ORTHO PHARMACEUTICAL CORPORATION **Music Room—87**
Raritan, New Jersey

ORTHO cordially invites you to Booth 87 where the well-known line of obstetrical and gynecological pharmaceuticals will be on display. Particular emphasis will be placed on Ortho preparations for conception control. Ortho representatives will be on hand to offer pertinent information on their products.

PACIFIC COAST MEDICAL BUREAU, Agency **Bollroom—26**
San Francisco

Pacific Coast Medical Bureau, Agency, San Francisco, will have representatives in Booth 26. This is the oldest medical bureau in the state and their many contacts assure you of prompt service if you wish a physician-surgeon in your offices, a specialist for a group or if you wish to relocate. Locations are checked for suitability. All services confidential. Drop by and say hello at Booth 26.

PELTON & CRANE CO. **Bollroom Foyer—20**
Detroit, Michigan

A new, big PELTON HP-2 joins the pioneering, SPEEDY FL-2 for fast, effective autoclaving. This new autoclave is on display for the first time at this meeting of the California Medical Association and physicians are cordially invited to drop by our booth and see this new PELTON HP-2. Our representatives will be happy to discuss any and all Pelton products.

PET MILK COMPANY **Bollroom—57**
San Francisco

The Pet Milk Company's display will feature the famous Collins quadruplets. We will have at our display all of the helpful services that the Pet Milk Company is so famous for in furnishing doctors in their practice.

CHARLES PFIZER & CO., Inc. **Bollroom—53**
Brooklyn, New York

Terramycin, newest of the broad-spectrum antibiotics, forms a dramatic central feature of the display of Chas. Pfizer & Co., Inc., Brooklyn, New York. The newest dosage forms of Terramycin are exhibited and indications for use are described.

PHILIP MORRIS & CO., Ltd., Inc. Ballroom Fayer—17
New York, New York

Philip Morris and Company will show the results of research on the irritant effects of cigarette smoke. These results show conclusively that Philip Morris are less irritating than other cigarettes. An interesting demonstration will be made on smokers at the exhibit which will show the difference in cigarettes.

PHYSICIANS ELECTRIC SERVICE CORP.

Las Angeles Ballroom Fayer—11

Physicians Electric Service Corporation will display the Universal X-Ray, 100 MA/100 KVP, Rotating Anode Tube, the Beck-Lee Direct Writing Electrocardiograph and the Burdick FCC Approved Diathermy. You are cordially invited to visit our booth.

PICKER X-RAY

Ballroom—42

Las Angeles

We have for display the New Picker 60 Milliampere Mobile X-Ray unit equipped with a rotating anode tube. Also, New Picker-Polaroid Cassette and processing unit which will give you a flat, dry finished radiograph in 60 seconds.

PITMAN-MOORE COMPANY

Music Room—73

Indianapolis, Indiana

Pitman-Moore Company cordially invites all members and friends of the California Medical Association to visit its exhibit booth, 73. Polycin Ointment, Novahistine and Immune Serum Globulin, the most valuable aid in the control of paralytic poliomyelitis, will be featured. Mr. Paul Fledderjohn, Western Regional Manager, will be in charge of the company's exhibit.

A. H. ROBINS COMPANY, Inc.

Music Room—89

Richmond, Virginia

Physicians attending the California Medical Association Convention are extended a cordial invitation to visit the exhibit of the A. H. Robins Company, which is this year celebrating its 75th year of service to the medical profession.

Mr. Jack Farber and Mr. James Buman, Jr., will be in attendance to welcome you and answer inquiries relative to Robins' prescription specialties.

SANBORN COMPANY

Ballroom—59

Cambridge, Massachusetts

Latest-model Sanborn instruments for clinical diagnosis to be shown at Booth 59 will include the Viso-Cardiette, direct-writing electrocardiograph; and the Metabulator, self-enclosed metabolism tester. Complete data will also be available on the Sanborn Twin- and Poly-Visos, two- and four-channel Biophysical research recording systems; on the Sanborn Electromanometer, widely used instrument for physiologic pressure measurements; and on the new Sanborn Twin-Beam, two-channel recorder for simultaneous (or separate) recording of phonocardiograms and electrocardiograms.

SANDOZ PHARMACEUTICALS

Ballroom—47

San Francisco

This display will feature Cafergot for the oral treatment of migraine; Methergine, an oxytocic; Cedilanid, a cardiac glycoside; Hydergine for essential hypertension and peripheral vascular disease, and Fiorinal for tension headache.

W. B. SAUNDERS COMPANY

Ballroom—24

Philadelphia, Pennsylvania

Some of Saunders' most recent publications on display for your inspection will be: *1953 Current Therapy*; new *Surgical Forum*; Todd, Sanford & Wells' *Clinical Diagnosis by Laboratory Methods*—12th edition; Banks & Laufman's *Atlas of Surgical Exposures of the Extremities*; Parsons & Ulfelder's *Pelvic Operations*; Beckman's *Clinical Pharmacology*; Dunphy & Botsford's *Physical Examination of the Surgical Patient*; Alexander's *Treatment of Mental Disorders*; and Sheldon, Mathews & Lovell's *Clinical Allergy*.

Also such standards works as Cecil-Loeb's *Textbook of Medicine*; Dorland's red-backed *Dictionary*; and the *Medical and Surgical Clinics of North America*.

R. L. SCHERER COMPANY

Music Room—60

Los Angeles

The R. L. Scherer Company will display the latest in Short Wave equipment—Burdick Electrograph—wire recorders, and items of interest to the profession.

SCHERING CORPORATION

Ballroom—34

Bloomfield, New Jersey

Members of the California Medical Association and their guests are cordially invited to visit the Schering exhibit where new therapeutic developments will be featured. Included in this exhibit will be Prantal, Methylsulfate, Schering, the first selective anticholinergic agent, and Dor-nison, the non-barbiturate hypnotic.

Schering representatives will be present to discuss with you these products as well as other products of our manufacture.

G. D. SEARLE & CO.

Ballroom—55

Chicago, Illinois

You are cordially invited to visit the Searle booth where our representatives will be happy to answer any questions regarding Searle Products of Research.

Featured will be Vallestiril, the new synthetic estrogen for menopausal symptoms; Banthine, the true anticholinergic drug for the treatment of peptic ulcers, and Dramamine, for the prevention and active treatment of motion sickness.

SHARP & DOHME

Ballroom—43

Philadelphia, Pennsylvania

Research data relative to oral penicillin therapy is featured at the Sharp & Dohme technical display. The exhibit endeavors to justify reliance on oral penicillin for the therapy of the majority of penicillin treatable infections, excluding fulminating diseases requiring hospitalization. A resume of pharmacological attributes of certain nasal decongestants completes the exhibit. Expertly trained personnel will be present to discuss these observations.

SMITH, KLINE & FRENCH LABORATORIES **Bollroom—33**
Philadelphio, Pennsylvonio

We extend a cordial invitation to you to visit our booth where 'Dexedrine' SPANSULES will be featured. Each capsule contains more than 100 tiny pellets with varying disintegration times. The 'Dexedrine' (15 mg.) is released gradually, yet uniformly, over a SPAN of 8 to 10 hours. Thus, in weight reduction, one 'Dexedrine' SPANSULE, taken on arising, curbs appetite evenly and effectively throughout the day.

E. R. SQUIBB & SONS **Bollroom Foyer—22**
New York, New York

New Squibb products, and new brochures of useful interest to you on products already introduced, will be featured at Booth 22. As in former years, your Squibb representative again cordially invites you to visit the Squibb booth.

J. W. STACEY, Inc. **Bollroom Foyer—13**
Son Francisco

Stacey's, established over a quarter of a century ago by members of the medical profession, provides the doctor in the West with an efficient source for all medical books of all publishers. At Booth 13 you will find displayed the latest books on medicine, surgery, and the specialties. You are cordially invited to browse at your leisure.

STAYNER CORPORATION **Bollroom Foyer—9**
Berkeley

Stayner cordially invites you to visit our booth where we will exhibit VIT-A-STAY, the latest development in Vitamin A therapy which affords better absorption, freedom from regurgitation and sensitivity. VIT-A-STAY tablets contain no oil of any kind to emulsify. We will also feature Stayner Placebo Capsules for barbiturate withdrawal therapy and demonstrate our fast-acting, water-soluble D.A.S. tablets for control of obesity. We will be happy to discuss any of the other 120 products of our manufacture or to merely have you use our booth as your headquarters.

THE STUART COMPANY **Music Room—93**
Posodeno

The Stuart Company will present a general exhibit of Stuart products which are in the basic nutritional field. Among the products to be displayed are: Stuart Lipotaine, a new approach to lipotropic therapy based on the lipotrope, Betaine; Stuart Amvicel, a balanced formula containing the fine factors important for the control of obesity; and Stuart Normacid, a completely different and improved approach to the problem of Hydrochloric Acid-Pepsin Therapy. Other products in the Stuart line will also be displayed.

U. S. VITAMIN CORPORATION **Bollroom—39**
New York, New York

See the "oil-in-water" demonstration of liposoluble vitamins A and D made completely water soluble . . . a vitamin technical achievement originated and developed by the U. S. Vitamin Corporation Research Laboratories.

Three pharmaceutical firsts . . . Vi-Syneral Vitamin Drops—multivitamins in drops solution; Vi-Syneral Inject-

able—multivitamin parenteral solution, and now Vi-Aqua Syrup—aqueous multivitamins in candy-like syrup . . . for more rapid absorption, more certain utilization . . . no fish taste, odor, nor allergens.

We cordially invite you to our booth for detailed literature and professional samples.

THE UPJOHN COMPANY **Bollroom—35**
Kolomozoo, Michigan

The importance of Cortisone is expanding as clinicians discover broadening uses. The scope of its application increases from month to month. The Upjohn Company is justly proud of its part in the development of Cortisone and in its discovery of new production methods. It is our aim to make Cortisone available to ever increasing numbers. Competent representatives welcome your inquiries and discussion.

VAISEY-BRISTOL SHOE CO., Inc. **Music Room—67**
Monett, Missouri

Jumping Jacks are not represented as "corrective" shoes but rather as a nearer equivalent to the healthfulness of going barefooted. Representatives will show how the footprint which develops on the soles of Jumping Jacks provides a case history of the individual foot function of the child. Representatives will also show examples of Dr. Henry A. Sincok's adhesive tape wedging of shoes.

VARICK PHARMACAL CO., Inc. **Bollroom—32**
New York, New York

Varick Pharmacal Co., Inc.—E. Fougera & Co., Inc., cordially invite physicians to discuss with Professional Service Representatives new preparations of importance to their everyday practice. Descriptive literature and samples of all products will be available.

WALKER LABORATORIES, Inc. **Music Room—79**
Mount Vernon, New York

HEDULIN is a new oral anticoagulant, rapid-acting, economical and substantially safe for treatment in hypoprothrombinemia. Council-Accepted HEDULIN differs chemically from oral anticoagulants in general use. It is not a coumarin derivative and is unlikely to induce the adverse effects often attributed to this class of compounds. Clinical investigation has shown this drug to be free from cumulative effects, rapid-acting and with the favorable characteristic of returning prothrombin time to normal within 24 to 48 hours after withdrawal.

HEDULIN is available in uncoated tablets each containing 50 mg. of Phenindione. The initial dose should be 200 to 300 mg. of HEDULIN with a maintenance dose of 50 to 100 mg. per day in each case. After establishment of maintenance dose, prothrombin time determination is required only once in 7 to 14 days.

WALTERS SURGICAL COMPANY **Bollroom Foyer—5**
Los Angeles

We will exhibit the latest X-Ray and Physiotherapy equipment made by H. G. Fischer & Company. Also, the newly designed Cardiotron Electrocardiograph and new surgical items of general interest.

WARREN-TEED PRODUCTS CO.**Bollroom—44**

Columbus, Ohio

The Warren-Teed Products Company cordially invites you to visit their exhibit at Booth 44. Sinan (Brand of Mephenesin Warren-Teed) used in the treatment of certain spastic and neuromuscular disorders will be featured at this exhibit. Courtous representatives will be in attendance to assist registrants in any way possible.

WESTERN SURGICAL SUPPLY COMPANY

Los Angeles

Music Room—62, 63

The Western Surgical Supply Company of Los Angeles and San Francisco will have on display many physicians' supply instruments including examining room furniture, sterilizing equipment, electric equipment, Birtcher-Bandmaster-Diathermy, hypodermic syringes and needles and many other items for use in a doctor's office. You are cordially invited to visit our booth.

WESTINGHOUSE ELECTRIC CORPORATION

Baltimore, Maryland

Bollroom Foyer—8**WESTWOOD PHARMACEUTICALS****Music Room—82**

Buffalo, New York

Westwood displays its vaginal anti-infectives Gentia-Jel and Westhiazole—now packaged in plastic single-dose disposable applicators.

These plastic applicators make possible antimycotic therapy in the office and at home, with gentian violet—without the mess and inconvenience usually associated with this specific moniliacide. Demonstrations will be made at the Westwood booth.

WHITE LABORATORIES, Inc.**Bollroom—37**

Kenilworth, New Jersey

DIENESTROL—the potent, orally effective synthetic estrogen—differs chemically from stilbestrol and other syn-

thetic estrogens. It is unique in its action and is one of the best tolerated of all orally effective synthetic estrogens. GITALIGIN has been described as a "... digitalis preparation of choice."

COD LIVER OIL CONCENTRATE LIQUID provides economical and convenient dosage of vitamin A and D—each drop equivalent to one teaspoonful of cod liver oil in vitamin D content. The vitamin A and D are present in a 5:1 ratio. Also available as palatable "candy-tasting" tablets and soft gelatin capsules which provide high potency medication.

White Laboratories representatives will gladly welcome physicians at Booth 37 to discuss with them the above-listed products.

WINTHROP-STEARNs, Inc.**Bollroom—40**

New York, New York

Winthrop-Stearns, Inc., New York, extends a cordial invitation to visit Booth 40, where the following products will be featured: TELEPAQUE, the new, highly effective and well tolerated oral cholecystopaque medium. Gives denser, clear-cut pictures of the gallbladder and, in a substantial number of cases, also permits visualization of the biliary ducts; LEVOPHED, the true vasoconstrictor hormone of the Adrenal Medulla, for the maintenance of blood pressure in shock and other acute hypotensive states; MILIBIS SUPPOSITORIES, new, highly effective specific against trichomonal, monilial, bacterial (nongonococcal) and mixed vaginitis.

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Philadelphia, Pennsylvania

You are cordially invited to visit the Wyeth display, which will feature: S-M-A,[®] the modern, perfectly balanced infants' formula that is unsurpassed in similarity to human milk and Thiomerin,[®] the recently developed, effective mercurial diuretic that produces an even and persistent fluid loss without drastically depleting effects. It is particularly adaptable to self-administration. Representatives will be on hand to discuss and supply literature concerning these and other widely prescribed Wyeth ethical specialties.

OFFICERS AND DELEGATES

General Officers

L. A. ALESEN, Los Angeles.....	President
JOHN W. GREEN, Vallejo.....	President-Elect
DONALD A. CHARNOCK, Los Angeles.....	Speaker of House of Delegates
WILBUR BAILEY, Los Angeles.....	Vice-Speaker of House of Delegates
SIDNEY J. SHIPMAN, San Francisco.....	Chairman of Council
ALBERT C. DANIELS, San Francisco.....	Secretary
DWIGHT L. WILBUR, San Francisco.....	Editor
JOHN HUNTON, San Francisco.....	Executive Secretary
PEART, BARATY & HASSARD.....	Legal Counsel

Members of House of Delegates—50th Annual Session

TOTAL DELEGATES (284) DELEGATES EX OFFICIO (33)

L. A. Alesen, Los Angeles.....	President
John W. Green, Vallejo.....	President-Elect
Donald A. Charnock, Los Angeles.....	Speaker of House of Delegates
Wilbur Bailey, Los Angeles.....	Vice-Speaker of House of Delegates
Albert C. Daniels, San Francisco.....	Secretary-Treasurer
Dwight L. Wilbur, San Francisco.....	Editor
Francis E. West (1955).....	Councilor 1st District
Omer W. Wheeler (1953).....	Councilor 2nd District
H. Clifford Loos (1954).....	Councilor 3rd District
J. Philip Sampson (1955).....	Councilor 4th District
A. A. Morrison (1953).....	Councilor 5th District
Neil J. Dau (1954).....	Councilor 6th District
Hartzell H. Ray (1955).....	Councilor 7th District
M. Laurence Montgomery (1953).....	Councilor 8th District
Donald L. Lum (1954).....	Councilor 9th District
Warren L. Bostick (1955).....	Councilor 10th District
Wayne E. Pollock (1953).....	Councilor 11th District

ELECTED DELEGATES (251)

Alameda-Contro Costa County (21)

Dorothy M. Allen	Herman Allington
Cyril J. Attwood	J. C. Bartlett
James A. Barr	Merle Buehler
Philip N. Baxter	R. Abbott Crum
K. W. Benson	Kaho Daily
John Blum	Floyd Due
Edwin Clausen	David J. Dugan
Thomas J. Dozier	Homer Fornoff
Grant Ellis	Claude Forbush
L. H. Fraser	Malcolm Hadden
Bernard B. Gadwood	Frank Haight
James E. Graeser	George S. Irvine
Ernest W. Henderson	H. P. Maloney
William Kaiser	James Raphael
Lester Lawrence	Robert L. Redfield
Robert S. Leet	Thomas T. Rolleri
Noble Logan	Joseph Sadusk
James Reavis	P. R. Shumaker
T. E. Reynolds	Helen Jean Snook
Maxwell Thebaut	Stuart Stephens
Stanley R. Truman	Dan Tucker

Delegates

Alternates

Butte-Glenn County (2)

Marvin Chernow	Donald Casey
Frank I. O'Neill	Thomas Elmendorf

Fresno County (5)

Verne Ghormley	J. M. Arthur
E. C. Halley	H. M. Ginsburg
Henry A. Randel	Arthur Howard
Eliot Sorsky	George Olson
J. E. Young	Robb Smith

Humboldt County (2)

O. R. Myers	Fred A. Olson
Francis H. O'Neill	Joseph S. Woolford

Imperial County (2)

Charles M. Cutshaw	Jack R. Bostwick
Frederick Powers Heald	George C. Holleran

Inyo-Mono County (2)

C. C. Curtis	Lloyd S. Bambauer
Clarence L. Scott	George Shultz

Kern County (3)

Roderick A. Ogden	Robert Douds
Robert A. Patrick	Carl L. Moore
J. E. Vaughan	Raymond W. Owens

Kings County (2)

W. S. Bridwell	Paul Brothers
William F. Chamlee	Lloyd Christensen

Lassen-Plumas-Modoc County (2)

Roy M. Peters	R. A. Greenman
William Quinn	Paul McKinney

Delegates

Alternates

Los Angeles County (94)

Marden A. Alsberge
E. Vincent Askey
Elmer J. Ball
Franklin I. Ball
Madelene Beekenbach
Earl J. Boehme
Lewis T. Bullock
Behle B. Burns
L. C. Burwell
Marvin Calmenson
Robert V. Carter
Tenero D. Caruso
Donald Cass
William C. Clough
R. Wendell Coffelt
Wells C. Cook
Clair P. Cosgrove
Jay B. Cosgrove
William E. Costolow
Lyle G. Craig
Edward H. Crane, Jr.
Jay J. Crane
Verne C. Crowl
Philip J. Cunnane
Rynol A. Dahlman
Dean C. Denman
Leon O. Desimone
M. A. Desmond
Harry F. Dietrich
John W. Dorsey
James C. Doyle
Frederic Ewens
Gaylord Fisher
Robbin E. Fisher
Paul D. Foster
Thomas M. Gairdner
Mark Giffords
Robert B. Haining
Dorothy Hewitt
John W. Higgins
Eugene F. Hoffman
Elizabeth Mason Hohl
Howard P. House
Louis L. Huff
John B. James
Fordyce Johnson
Julius Kahn
Bennett W. Kantola
Thomas R. Kidd
Arthur A. Kirchner
George L. Kraft
E. R. Lambertson
Arthur John Langan
Thomas A. LeValley
Karl Lewis
J. Lafe Ludwig
Edgar F. Mauer
Angus McDonald
Oliver Moore
Carl L. Mulfinger
Joseph P. O'Connor
J. Norman O'Neill
Frank W. Otto
W. DeGrove Padgett
Donald W. Pettis
Merl Lee Pindell
F. M. Pottenger, Jr.
Hubert J. Prichard
Myron Prinzmetal
William F. Quinn
James F. Regan
E. T. Remmen
J. M. de los Reyes
Edward C. Rosenow, Jr.
Phillip L. Rossman
Eric A. Royston
John C. Ruddock
Ralph L. Schroeder
Arthur H. Schwartz
Walter Scott
J. Edward Short
Ralph Varian Sloan
Gordon K. Smith
Justin J. Stein
G. Arnold Stevens
William J. Tension
Clinton H. Thienes
Malcolm Todd
Ewing L. Turner
H. Milton Van Dyke
E. E. Wadsworth, Jr.
Warren A. Wilson
Harold R. Witherbee
William T. Zimmermann

John D. Abbey
Lawrence Adams
Herbert J. Andrews
Arthur T. Bailey
Francis J. Baker
Reid L. Beers
Daniel Beltz
George E. Bien
Linus H. Pittner
Robert L. Blackmun
Jesse L. Block
Peter H. Blong
Harold Boyd
Fred E. Bradford
James L. Bray
Donald Brayton
David J. Brobeck
George E. Brown
Arthur H. Buell
Walter Buerger
John A. Bullis
Norman L. Cardey
John L. Caster
Rafe C. Chaffin
John G. Champion
Merwin Reid Chappel
James G. Conti, Jr.
Harold E. Crowe
J. W. Dasset
Charles L. Davis
Douglas Donath
A. Keith Droz
Lewis F. Ellmore
Wells E. A. Forde
Vernon W. Foster
Robert G. Freeman
William A. Gannon
Garland F. Garrett
Frederic J. Gaspard
Wallace G. Gilbert
Charles Giffillan
McCleery Glazier
Elmer F. Goel
George W. Groth, Jr.
Victor E. Hallstone
John B. Hamilton
Bernard J. Harvey
Walter L. Haworth
Robert Helms
Alfred G. Henrich
Robert B. Hope
L. Dale Huffman
Willis L. Jacobus, Jr.
George E. Judd
Thomas A. Kendig
T. J. Laughlin
O. Dale Lloyd
Robert A. Lovell
Douglas R. MacColl
Walter P. Martin
June P. McBride
John B. McDonald
Edwin E. McNeil
Clement J. Molony
Alexander A. Mueller
E. J. Mueller, Jr.
Roderick M. Ncale
Edward F. Nippert
Edward C. Pallette
Donald D. Parker
Ross V. Parks
Edwin B. Plimpton
Charles T. Poulson
Morton H. Randall
Chester L. Roberts
Ward M. Rolland
Irving Rosenberg
Fred Schlumberger
Robert M. Shelton
Bernard H. Smith
Earl H. Smith
William H. Snyder
Harold D. Spickerman
Norman F. Sprague, Jr.
Karl P. Stadlinger
Packard Thurber, Jr.
Paul E. Travis
George G. Verbryck
Leon R. Walker
Charles W. Ware
F. C. Westerhout
John W. Whitsett
Lawrence A. Williams
J. Walter Wilson

Madera County (2)

Omar Need
Coe T. Swift

Gilbert Daggett
L. A. Solberg

Delegates

Alternates

Marin County (2)

Edward Campion
William B. Smith

Arnold Nutting
Leo L. Stanley

Mendocino-Lake County (2)

Thomas P. Hill
James B. Massengill

Charles Craig
Robert B. Smalley

Merced County (2)

Shelby Hicks
George Pimentel

A. B. Bigler
Avery Sturm

Monterey County (2)

James H. McPharlin
Ernest E. Simard

Howard C. Miles
Allen Conrad Mitchell

Napa County (2)

Dale E. Barber
Walter H. Brignoli

Donald B. Marchus
H. B. Messinger

Orange County (4)

A. Norton Donaldson
Arthur J. Nies
J. B. Price
L. E. Wilson

Harold F. Galbraith
Samuel Gendel
Milton M. Maxwell
William Owen

Placer-Nevada-Sierra County (2)

Harry March
William M. Miller

Max Dunievitz
Saul Ruby

Riverside County (2)

William Aikin
Franklin B. Mead

James C. Long
Walter J. Wood

Sacramento County (5)

Dave F. Dozier
Dan O. Kilroy
Milton V. Sarkisian
Ralph Teall
James H. Yant

Charles E. Grayson
A. M. Henderson, Jr.
Frank A. MacDonald
Charles J. Wallace
Raymond M. Wallerius

San Benito County (2)

John J. Haruff
Eberle Sheldon

R. E. Brown
E. N. Moore

San Bernardino County (5)

John H. Coughlin
Carl M. Hadley
J. Needham Martin
E. L. Tisinger
Roger A. Vargas

Charles J. Clock
Joseph S. Hayhurst
Gordon L. Helstrom
Frank C. Melone
Leonard M. Taylor

San Diego County (11)

Douglass H. Batten
H. G. Holder
Frederick G. Hollander
Roger C. Isenhour
Arthur A. Marlow
A. E. Moore
Willard H. Newman
Ross C. Pyle
Frank H. Robinson
John M. Rumsey
Joseph W. Telford

Walter F. Carpenter
Patricia E. Dunklee
Charles R. Hyde
Ralph M. King
Robert Loveall
Roy A. Ouer
James R. Phalen
James W. Ravenscroft
W. T. Soldmann
Calvin L. Stewart
Chester Tancredi

San Francisco County (29)

Dorothy W. Atkinson
Walter Beckh
William L. Bender
Donald M. Campbell
George Campion
Garnett Cheney
Francis J. Cox
Frederick A. Fender
Kenneth D. Gardner
L. Henry Garland
Henry Gibbons III
Harold E. Hand
Allen T. Hinman
Alson R. Kilgore
Russell R. Klein
Carleton Mathewson, Jr.
Joseph S. McGuinness
Stacy R. Mettier
Herbert C. Moffitt, Jr.
Edmund J. Morrissey
Francis Rochex
William L. Rogers
Karl L. Schupp, Jr.
Samuel R. Sherman
Henry L. Silvani
August Spitalny
Grace M. Talbott
Robertson Ward
Helen B. Weyrauch

Douglas G. Campbell
Donald A. Carson
Roy B. Cohn
Robert C. Combs
Roberta F. Fenlon
Francis T. Hodges
William C. Kuzell
E. Donald Lastreto
Charles A. Noble, Jr.
Frank Norris
Mary B. Olney
Leon O. Parker
Agnes G. Plate
Victor Richards
Abraham B. Sirbu
Merrell A. Sisson
Curtis E. Smith
Francis Scott Smyth
Vance M. Strange
James H. Thompson
Emile D. Torre
Lawrence M. Trauner
William W. Washburn
Harry Weinstein
Philip R. Westdahl
Forrest M. Willett
Henry B. Woo
Reuben Zumwalt

Delegates

Alternates

Delegates

Alternates

Son Joaquin County (3)
Louis P. Armanino
Jack Eccleston
Neill P. Johnson

J. Frank Doughty
Edmund P. Halley
James R. Powell

Son Luis Obispo County (2)
Charles R. Kennedy
Robert O. Pearman

Edward Blair
Laurence C. Gaebe

Son Moteo County (6)
James S. Edwards
Thomas E. Farthing
Logan Gray
Ralph D. Howe
A. G. Miller
Frederic P. Shidler

Charles D. Armstrong
C. D. Benninghoven
Bradley C. Brownson
Philip S. Geller
George J. Laird
Harry F. Smith

Santo Borboro County (3)
J. Gary Campbell
Arthur E. Wentz
Alfred B. Wilcox

Hugh F. Freidell
David L. Reeves
L. K. Thacher

Santo Clara County (8)
Burt Davis
Thomas N. Foster
Leon P. Fox
J. B. Josephson
Leslie B. Magoon
William L. Molineux
Paul V. Morton
John C. Wilson

Lee Blanchard
Albert R. Currin
J. D. Lamon
Robert A. Loehr
Gabe Long
Ansten R. Ness
Sydney Thomas
George Waters

Santo Cruz County (2)
Luther Newhall
Samuel B. Randall

J. A. Ludden
Lorin Siegel

Shasto County (2)
Roland R. Jantzen
George A. Martin

Julius Kehoe
Joe L. Price

Siskiyou County (2)
James B. McGuire
Albert H. Newton

Eugene V. Anderson
Harry L. Vidricksen

Salana Caunty (2)
John Garthe
Lionel Johnson

F. Burton Jones
Felix J. Rossi, Jr.

Sonoma County (2)
Leonard W. Hines
Horace F. Sharrocks

John J. Mohrman
Donovan C. Oakleaf

Stonislous County (2)
R. Stewart Hiatt
Edward K. Prigge

M. C. Collins
George S. Feher

Tehamo County (2)
R. G. Frey
Frank Townley

A. H. Meuser
O. T. Wood

Tulore County (2)
James E. Feldmayer
Robert D. Karstaedt

C. H. Johnson
Ralph N. Miller

Venturo County (2)
Franklin K. Helbling
J. W. Moore

Richard Reynolds
Woodrow W. Schmela

Yolo County (2)
Thomas Y. Cooper
John G. O'Hara

James H. Kimbell
Max Waters

Yuba-Sutter-Coluso County (2)
Stanley R. Parkinson
Francis P. Wisner

Charles B. Kimmel
Joseph J. Salopek

Post Presidents (16)
George H. Kress.....1916
Edward N. Ewer.....1925
Lyle C. Kinney.....1930
Junius B. Harris.....1931
George G. Reinle.....1933
Robert A. Peers.....1935
Harry H. Wilson.....1940
William R. Molony, Sr.....1942
Karl L. Schaupp.....1943
Lowell S. Goin.....1944
Sam J. McClendon.....1946
John W. Cline.....1947
E. Vincent Askey.....1948
R. Stanley Kneeshaw.....1949
Donald Cass.....1950
H. Gordon MacLean.....1951

House of Delegates Agenda

1953 Annual Session

Renaissance Room, Biltmore Hotel

Speaker.....Donald A. Charnock, Los Angeles
Vice-Speaker.....Wilbur Bailey, Los Angeles
Secretary.....Albert C. Daniels, San Francisco

FIRST MEETING

Sunday, May 24, 1953, at 9:30 a.m.

ORDER OF BUSINESS

1. Call to order.
2. Report of Committee on Credentials, and Organization of the House of Delegates.
3. Roll call.
4. Announcement and approval of Reference Committees.
 - (a) Committee on Credentials. (Delegates must register with the Committee.)
 - (b) Reference Committee on the Reports of Officers, the Council and Standing and Special Committees. (Reference Committee No. 1.)
 - (c) Reference Committee on Finance, to review the reports of the Secretary-Treasurer and the Executive Secretary and to study and make recommendations to the House of Delegates on the budget submitted by the Council and the amount of dues for the ensuing year (Reference Committee No. 2.)
 - (d) Reference Committee on Resolutions and New and Miscellaneous Business. (Reference Committee No. 3.)
 - (e) Reference Committee on Amendments to the Constitution and By-Laws. (Reference Committee No. 4.)
 - (f) Reference Committee on C.P.S. business.
5. Address by President Lewis A. Alesen.
Presentation of 50-Year-Awards.
6. Miscellaneous announcements by the Speaker. (Stenographic service, to secure triplicate copies of resolutions, etc.)
7. Report of the President—Lewis A. Alesen.
8. Report of the President-elect—John W. Green.
9. Report of the Speaker of the House of Delegates — Donald A. Charnock.
10. Report of the Vice-Speaker—Wilbur Bailey.
11. Report of the Chairman of the Council—Sidney J. Shipman.
12. Report of the Council—Sidney J. Shipman.
13. Report of the Trustees of the California Medical Association—Lewis A. Alesen, President.
14. Report of the Secretary—Albert C. Daniels.
15. Report of the Treasurer—Albert C. Daniels.
16. Report of the Executive Secretary—John Hunton.
17. Report of the Editor—Dwight L. Wilbur.
18. Reports of District Councilors.
19. Reports of Councilors-at-Large.
20. Report of Legal Counsel—Peart, Baraty & Hassard.
21. Report of C.P.S. Board of Trustees.
22. Reports of Standing and Special Committees:
 - A. *Standing Committees:*
 - (a) Executive Committee—Donald D. Lum.
 - (b) Committee on Associated Societies and Technical Groups—Robert A. Scarborough.
 - (c) Auditing Committee—Donald D. Lum.
 - (d) Committee on History and Obituaries—Dewey R. Powell.
 - (e) Committee on Hospitals, Dispensaries, and Clinics—John B. Hamilton.
 - (f) Committee on Industrial Practice—Raymond M. Wallerius.
 - (g) Committee on Medical Defense — H. Clifford Loos.
 - (h) Committee on Medical Economics—Leopold H. Fraser.
 - (i) Committee on Medical Education and Medical Institutions—Lewis T. Bullock.
 - (j) Committee on Military Affairs and Civil Defense —Justin J. Stein.
 - (k) Physicians' Benevolence Committee—Axcel E. Anderson.
 - (l) Committee on Postgraduate Activities—Edward C. Rosenow, Jr.
 - (m) Committee on Public Policy and Legislation—Dwight H. Murray.
 - (n) Committee on Public Relations—Ed Clancy.
 - (o) Committee on Scientific Work (Annual Session) —Albert C. Daniels.
 - (p) Cancer Commission—Ian G. Macdonald.
 - (q) Editorial Board—Dwight L. Wilbur.
 - B. *Special Committees:*
 - (a) Delegates to the American Medical Association —E. Vincent Askey.
 - (b) Advisory Planning Committee—John Hunton.
 - (c) Blood Bank Commission—John Upton.
 - (d) C.P.S. Liaison Committee—Lewis A. Alesen.
 - (e) C.P.S. Study Committee—Wilbur Bailey.
 - (f) Medical Services Commission—Leslie B. Ma-goon.
 - (g) Committee on Industrial Health — Christopher Leggo.
 - (h) Committee on Rural Medical Service—Henry A. Randel.
 - (i) C.P.S. Fee Schedule Committee — DeWitt K. Burnham.

23. Report of Reference Committee No. 1—1952 Interim Session.
24. Report of Reference Committee No. 3—1952 Interim Session.
25. Report of Reference Committee No. 4—1952 Interim Session.
26. Old and Unfinished Business.
27. New Business.

SECOND MEETING

Wednesday, May 27, at 9:30 a.m.

ORDER OF BUSINESS

1. Call to order.
2. Supplemental report of Credentials Committee.
3. Roll call.
4. Secretary's announcement of Council's selection of place for the 1954 annual session.
5. Election of Officers:
 - (a) *President-elect.*
 - (b) *Speaker.*
 - (c) *Vice-Speaker.*
 - (d) *District Councilors (three-year term):*
 1. Second District—Omer W. Wheeler, Riverside (term expiring).
Second District—Imperial, Inyo, Mono, Orange, Riverside and San Bernardino counties.
 2. Fifth District—A. A. Morrison, Ventura (term expiring).
Fifth District—Ventura, San Luis Obispo, Santa Barbara and Ventura counties.
 3. Eighth District—M. Laurence Montgomery, San Francisco (term expiring).
Eighth District—San Francisco County.
 4. Eleventh District—Wayne E. Pollock, Sacramento (term expiring).
Eleventh District—Alpine, Amador, Butte, Colusa, Eldorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, Yolo and Yuba counties.
 - (e) *Councilors-at-Large (three-year terms):*

Sidney J. Shipman, San Francisco (term expiring).
Arthur A. Kirchner, Los Angeles (term expiring).
 - (f) *Delegates to American Medical Association:*

Delegates and Alternates to the American Medical Association are elected for terms of two calendar years. The Delegates and Alternates to be elected at this meeting will serve for two calendar years ending December 31, 1955.

Incumbents:

 - (a) Robertson Ward, San Francisco (term expiring).
 - (b) Sam J. McClendon, San Diego (term expiring).
 - (c) Eugene F. Hoffman, Los Angeles (term expiring).
 - (d) John W. Green, Vallejo (term expiring).

- (e) Lewis A. Alesen, Los Angeles (term expiring).
- (f) Frank A. MacDonald, Sacramento (term expiring).
- (g) *Alternates to American Medical Association:*

Incumbents:

 - (a) Henry Gibbons III, San Francisco (alternate to Robertson Ward).
 - (b) A. E. Moore, San Diego (alternate to Sam J. McClendon).
 - (c) Frederic S. Ewens, Manhattan Beach (alternate to Eugene F. Hoffman).
 - (d) Orris R. Myers, Eureka (alternate to John W. Green).
 - (e) J. B. Price, Santa Ana (alternate to L. A. Alesen).
 - (f) Henry A. Randel, Fresno (alternate to Frank A. MacDonald).

6. Election of C.P.S. Trustees:

Report of C.M.A. Council as Nominating Committee.

Incumbents:

 - (a) Donald Cass, Los Angeles.*
 - (b) Kendrick A. Smith, Los Angeles.*
 - (c) Francis T. Hodges.
 - (d) Mr. Robert A. Hornby.
 - (e) Vacancy in office—resignation of Harold M. F. Behneman.
7. Election of two members to C.M.A.-C.P.S. Liaison Committee.
8. Announcement by Secretary.

Council's nominations of members of Standing Committees (for approval by the House of Delegates).
9. Reports of Reference Committees:
 - (a) Report of Reference Committee No. 1 on Reports of Officers, the Council, and Standing and Special Committees.
 - (b) Report of Reference Committee No. 2 on Reports of the Secretary-Treasurer and the Executive Secretary, on budget and dues.
 - (c) Report of Reference Committee No. 3 on Resolutions and New and Miscellaneous Business.
 - (d) Report of Reference Committee No. 4 on Amendments to the Constitution and By-Laws.
 - (e) Report of Reference Committee on C.P.S. business.
10. Unfinished Business.
11. New Business.
12. Presentation of Officers:

President

President-Elect

Speaker

Vice-Speaker
13. Presentation of Certificate to Retiring President—Lewis A. Alesen.
14. Approval of Minutes. (Committee to edit.)
15. Adjournment.

DONALD A. CHARNOCK, *Speaker*
ALBERT C. DANIELS, *Secretary*

* Has served two consecutive terms; not eligible for reelection.

PRE-CONVENTION REPORTS

Officers • Councilors • Committees • County Societies

REPORTS OF GENERAL OFFICERS

REPORT OF THE PRESIDENT

To the Members of the California Medical Association and the House of Delegates:

It is proper that the officers of an organization should on occasion report upon their stewardship. Such a report by the president ought to concern itself with the broad aims and objectives of the organization, the extent to which those aims have been achieved, and the extent to which such achievement has failed. In addition, it would seem mandatory for such a report to stress the imminent threats to the ideals of the organization and their consummation and to offer in so far as is possible constructive suggestions of methods designed to meet those threats.

During the two years just past, it has been my high privilege to visit our county medical societies in every section of the vast state of California. With a membership exceeding 11,000 doctors of medicine practicing the healing art in large cities, smaller towns, and sparsely populated rural areas, there are naturally differences in particular problems confronting the individual physician and his county medical society. Significantly enough, however, all of these physicians have one objective in common, that is to make available to their patients the highest possible grade of medical care and to render that care within the ability of the patient to pay for it. In the rural areas great interest is manifested in the postgraduate programs, the one request being most often heard was that such programs might be enlarged and offered more frequently.

In most county societies the Woman's Auxiliary is an important component part of local activities. These women participate in women's clubs, church organizations, and civic movements of all kinds. They are alert, intelligent, aggressive, and wish only to know what the parent county association desires in the way of assistance, and they are only too happy to roll up their sleeves and go to work. As the result of this attitude, our Woman's Auxiliary to the California Medical Association, under the capable leadership of Mrs. Raleigh W. Burlingame, is one of our most important fighting arms. This year its program has been built around the slogan: "Reclaim Freedom in America."

The Association's fiscal affairs are in good condition. Under the able direction of Secretary-Treasurer Dr. Albert C. Daniels, aided by the Executive Committee under the chairmanship of Dr. Donald D. Lum, a careful audit of the Association's expenditures is periodically made. The central office at 450 Sutter Street under the excellent management of Executive Secretary Mr. John Hunton, operates smoothly and efficiently. Our employees are loyal and genuinely interested in their work.

CALIFORNIA MEDICINE, under the editorship of Dr. Dwight L. Wilbur, is rapidly being recognized as one of the outstanding state publications.

Our Public Relations Department, under the direction of Mr. Ed Clancy, ably assisted by associates Mr. Jerry Pettis and Mr. Glenn Gillette, has prepared a master plan for grass-roots public relations by the county societies and has gone into every area where requested to assist the county officers in these plans.

Dr. Dwight H. Murray and his capable Committee on Public Policy and Legislation aided and abetted by Mr. Ben H. Read, executive secretary of the Public Health League, and many others represent us at Sacramento the year around. A trip to the state capital impresses one with the high esteem in which our representatives are held by assemblymen, senators, and business and professional representatives alike. Over the years this type of representation has gained for us an enviable reputation and has brought requests to assist the Legislative Budget Committee in an analysis of the value of certain projects in the field of medicine.

Legal Counsel Howard Hassard is an institution in himself. To the extent that he can, he practices prophylactic law for his client, the California Medical Association, keeping us out of trouble most of the time, and skillfully extracting us from it on other occasions.

Too much praise and credit cannot be given to our Councilors, under the skillful leadership of Dr. Sidney J. Shipman, members of our commissions, and standing and special committees, who really perform the important foundation work of the Association and ferret facts in making recommendations to be considered in determining Association policy.

Because the threat of compulsory health insurance or political medicine seems momentarily and to a limited extent only to have been contained, we should not be blinded to other threats to medical freedom, merely because they seem to arise under different auspices, and seem, so their sponsors state, motivated by the highest of ideals. I refer, to be specific, to the rapid growth of (1) subsidized closed-panel systems of medical care, and (2) to the threat of labor organizations to enter the field of medical care through the widespread system of salaried physicians and elaborate health centers. A little careful analysis of the proposals underlying both of these plans will result inescapably in the realization that the ultimate objective is a complete monopoly over the rendition of medical care, and therefore, of course, ultimately a complete abolition of freedom for the practitioner as well as for his patient. In my view, it would make very little difference whether such an absolute monopoly were achieved by an interlocking directorate of business tycoons uttering reams of pious platitudes while at the same time destroying the private practitioner by the same old squeeze play which caused Judge Kenesaw Mountain Landis to dissolve the Standard Oil Corporation in 1908; or a monopoly over medical care achieved by the power-hungry labor leader whose featherbedding tactics have added 20 per cent to the cost of every good and service produced in this country, and who looks upon the physician as just another plum ripe for the picking; or a similar type of monopoly exercised by the cold leprous fingers of bureaucracy. Monopoly in medicine is just as bad for the ultimate consumer, the patient, and the purveyor, the physician and his associates, as it is for the consumer and producer of every other useful good and service throughout our economy as a whole.

The answer to these threats? There is no pat or simple one. It, of course, is trite and obvious to say that we must

make our own system of private medical care so attractive, make it operate so efficiently, place it within the means of everyone so completely by virtue of our voluntary prepayment plans that the monopolist will find no ready market for his wares. The Special Study Committee on California Physicians' Service has done a monumental piece of work and reported its findings at the Interim Session of the House of Delegates in San Francisco in December. Further discussion of this report is to be held at the May meeting. As the result of one of the recommendations of the Special Study Committee, the House of Delegates of the California Medical Association is now the House of Delegates of the California Physicians' Service, and there is a closer liaison between the parent and daughter organization. The Medical Services Commission, a permanent body authorized by the House of Delegates, is beginning its investigation into every phase of the prepayment of the costs of illness and will have some positive and constructive recommendations to make toward improving our services to the public. Private insurance companies are evidencing an interest in the field of medical care greater than ever before and have been more ready than ever to discuss with us the operation of indemnity plans, all offering unlimited freedom of choice to patient and physician alike. These are good selling points but they are not spectacular.

Once again, it is repetitious to state that medical economics is just one phase of the broad problem of economics as a whole. As physicians we must insist with all the intelligence and force at our command that the only healthy economy is the productive economy, the economy in which there are available the greatest abundance and variety of goods and services to everyone living within it, and an environment in which every individual is stimulated to produce to his utmost, to contribute, and to accumulate, thereby developing to the greatest possible degree his God-given talents. We must insist that any attitude or measure that in any manner interferes with the production, distribution, and consumption of goods and services in any field whatsoever interferes with the economic and social well-being of every member within the economy. We must appraise every proposed social change by one rule of thumb. What does it do to the human individual? Does it make him more or less dependent upon himself?

Upon this rock-bottom of fundamental principles we are in a position to participate widely in the economic and social structure as citizens as well as physicians, and to demonstrate that good medical care, like all of the other good things of this life, is just one of the enviable products of the American system of profit and loss or private competitive enterprise. In that system the only justifiable function of government is to protect the individual in the enjoyment and the accumulation of the fruits of his labor.

Respectfully submitted,

L. A. ALESEN, *President*

REPORT OF THE PRESIDENT-ELECT

To the President and the House of Delegates:

It has been pleasant and instructive to meet with twenty-one county medical society groups as well as some Auxiliary bodies and to carry the message of our profession to our constituents. We have stressed better public relations, 24-hour service to the sick and injured, interest in legislation affecting the practice of medicine in its local, state, national and international aspects and have assisted the president, wherever possible. We have mentioned the needs of the American Medical Education Foundation, in order that we may keep our medical colleges free of federal influence and

control. Our interest must continue in the problem of recruitment for nursing schools and we have emphasized that fees for service shall be based upon the ability of the patient to pay. We have attended all meetings of the Council and of the Executive Committee.

The assistance of, and the messages of our executive secretary, John Hunton, and his entire office personnel as well as that of Ed Clancy, Glenn Gillette and Jerry Pettis and Mr. Ben Read are gratefully acknowledged.

In many county society groups we have found able and conscientious doctors, whom we salute in this report. They are a credit to the profession and are now showing the leadership which we all admire. The effect of their efforts is very apparent in their communities and it is to be hoped that physicians everywhere will continue to exert themselves in the development of their cities and counties. Medical counsel in community affairs is a very desirable activity, and more physicians should identify themselves with clubs, veterans' organizations, city councils, boards of directors of various groups and chambers of commerce.

Blood is still urgently needed. We must keep this need before the public constantly and assist the program by word and deed.

In closing I wish to call attention again to the need of our medical schools for supplementary funds. Have you done your share? Why make it necessary for government to subsidize medical education when gifts are tax free and 100 per cent of the money is turned directly over to the school of your choice? It is difficult to understand the apparent apathy to this worthy project. "Keep Medicine Free in Fifty-three."

Respectfully submitted,

JOHN W. GREEN, *President-Elect*

REPORT OF THE SPEAKER OF THE HOUSE OF DELEGATES

To the President and the House of Delegates:

The House of Delegates functioned very expeditiously at the Interim Session. The Reference Committees carried out their tasks with a minimum of confusion.

The business of the House is continuing to increase. Much thought is being given to streamlining the agenda. The visual roll call is meeting with universal approval. Committee reports and other routine business are being presented with a minimum expenditure of time.

Full discussion of the important problems coming before the Delegates must be given ample time necessary for proper consideration. This is the primary function of the House of Delegates.

Our next Annual Session will continue to have improvements in planning for the House of Delegates. It is hoped that the meetings will move rapidly but thoughtfully. In this way we may eliminate the late evening endurance contests which are conducive of neither good judgment nor definitive actions.

Respectfully submitted,

DONALD A. CHARNOCK, *Speaker*

REPORT OF THE VICE-SPEAKER

To the President and the House of Delegates:

The Speaker in collaboration with the Vice-Speaker has been making all possible efforts to streamline procedures and to shorten the time necessary for roll call, etc.

Respectfully submitted,

WILBUR BAILEY, *Vice-Speaker*

REPORT OF THE CHAIRMAN OF THE COUNCIL

To the President and the House of Delegates:

The Council procedure for the year has been somewhat more flexible than in the past due to an attempt to hear members and other interested persons who, because of one reason or another, were forced to appear during certain hours of the morning or afternoon. Unfortunately, it has not been possible to accommodate everyone as completely as could be wished, but an honest attempt has been made to do so. Barring such shifts in the agenda, the mornings have been devoted to committee reports and business of a routine nature, the lunch periods to hearing representatives of our own and other groups who wished to appear before the Council at that time, and the afternoons to the consideration of new problems.

As in the past, the meetings have been published regularly in *CALIFORNIA MEDICINE* so that the membership at large has been able to follow Council proceedings quite completely.

The chairman would like to thank the Council membership for their splendid record of attendance, for their interest, and for their willingness to give advice whenever called upon. He would also like to thank Dr. Murray, Mr. Hassard, Ben Read, John Hutton, Ed Clancy, and the other members of the public relations group for their assistance and advice.

Respectfully submitted,

SIDNEY J. SHIPMAN, *Chairman of the Council*

Report of the Council

To the President and the House of Delegates:

The Council has met on 12 days of the past calendar year, having scheduled five days of meetings between sessions of the House of Delegates and seven days during the Annual and Interim sessions of the House. Minutes of all meetings have appeared in *CALIFORNIA MEDICINE* and in themselves indicate the scope of the Council's activities.

It is the policy of the Council to welcome to its meetings all committee chairmen or members who wish to discuss matters pending before their committees. Likewise, the Council is ever ready to invite other guests to participate in discussions of matters of interest to the Association and its members. The list of invited guests often dwarfs the Council membership.

Listed below are some of the more important items which have come before the Council during the past year.

1. *State Department of Public Health:* Representatives of the State Department of Public Health have been invited to all Council meetings and problems pertaining to that department have been freely discussed. Among the items of mutual interest are laboratory animals and inspection, hospital construction funds, tumor registry, the Crippled Children's Act, rabies control, milk pasteurization and certification and the use of silver nitrate or other agents in the eyes of the newborn. Through its Committee on Public Health and Public Agencies, the Council has maintained a constant and friendly contact with the Department of Public Health, in the interest of sound public health measures and administration.

2. *California Physician's Service:* Each Council meeting is given a report by representatives of California Physicians' Service; at the same time, the Council is represented on the C.P.S. Board of Trustees by Councilors Morrison, Dau and Heron. Thus a complete liaison is accomplished and the two organizations are kept advised of each other's actions and policies.

3. *Disciplinary Actions:* By terms of the By-Laws, the Council may be called upon to name a referee to conduct

disciplinary hearings in the county societies. The Council also serves as an appeal body for any county society member who wishes to appeal the findings of a county society in disciplinary proceedings. During the past year the Council has heard one appeal and now has another pending. The Council has also appointed referees to conduct four disciplinary actions. Such proceedings are strictly in line with a democratic procedure and serve as a safeguard to the public and to other members of the profession.

4. *Industrial Fee Schedule:* The Council has been kept advised of the actions of the Committee on Industrial Accident Commission, which is working to achieve a new and compensatory schedule of fees for industrial accident cases. Dr. Francis J. Cox, chairman of that committee, has regularly sought the consent and advice of the Council before taking steps in furtherance of committee policies. It is the Council's hope that progress toward a modern industrial fee schedule may be made in the near future.

5. *Student American Medical Association:* The Council has continued to support the California chapters of the Student American Medical Association. Toward this end it has named Association members to serve as advisors to the various chapters. It has also authorized the issuance of subscriptions to the official journal at a cost to the student of only \$1 a year. In addition, it meets the expenses of one representative from each chapter to the annual Student A.M.A. meeting and invites two representatives from each chapter as guests of the Association at the C.M.A. Annual Session. Chapters have now been formed at four of the state's five medical schools and it is hoped that a similar chapter may be organized at Stanford Medical School before too long.

6. *Blood Bank Commission:* Several years ago the Council voted to establish a revolving loan fund of \$150,000, from which blood banks sponsored by the county medical societies could borrow, on a matching basis, to meet their capital needs. To date \$106,000 has been loaned from this fund to four blood banks. Repayments, made on the basis of a fixed sum per unit of blood drawn, have totaled \$39,096 and are continuing to be made monthly by the borrowing banks. A balance of \$66,904 remains outstanding on these loans. The Council has been happy to foster the community blood banking movement in California, a program which is unique in the country and which is calculated to make blood available to all Californians in time of need. The program has won nationwide acclaim and has been reported to the public in several articles in national publications. Dr. John R. Upton, chairman of the Blood Bank Commission, is to be commended on his unceasing efforts to develop an ideal blood banking program, and Mrs. Bernice Hemphill, who serves voluntarily as administrative assistant to the commission, is warmly thanked for her outstanding contributions to the success of the California system.

7. *Legal Department:* Mr. Howard Hassard, legal counsel, regularly attends Council meetings and keeps the Council posted on legal matters affecting the public health and the practice of medicine. In the past year the Council has authorized the continuation of court action seeking to define the corporate practice of medicine, an action which is currently before the courts. The Council has also been kept advised on numerous other legal items which have been reported in the minutes.

8. *Public Policy and Legislation:* Dr. Dwight H. Murray, legislative chairman, and Mr. Ben Read, executive secretary of the Public Health League of California, have kept the Council posted on legislative matters and have constantly been cooperative and invaluable for their counsel. As another state legislative session gets under way in 1953, the

Council anticipates numerous consultations on legislation. Meanwhile, the Association may feel every confidence in its legislative committee and representatives.

9. *Public Relations*: The Council has approved the public relations program instituted through the Association offices and looks to this program not only as a forward step in achieving high public esteem but also as a valuable aid to the county medical societies. The Advisory Planning Committee, which passes on the various programs prepared by the department of public relations, has been most helpful in evaluating numerous items prior to their being undertaken on a statewide scale.

10. *Group Disability Insurance*: The Council now has under study a proposal for issuance to Association members of a group disability insurance contract. Details are being worked out and an independent analysis of the program sought before definite action is taken. Such a program, if undertaken, would be as a supplement to programs now in operation, not as a replacement for such programs.

11. *Psychiatric Studies*: The Council was requested to appoint a committee to give an opinion on a report on certain psychiatric studies performed in a state institution. Members of the committee, plus other consultants, provided opinions on the report furnished, and the Association has been warmly thanked for this service by the Joint Legislative Budget Study Committee of the State Legislature. A further study for the same legislative committee is now under way.

12. *Rural Health*: The Council is thoroughly in accord with the projected program of the Committee on Rural Health and is ready to support and implement this activity. Fundamentally, the program calls for a cooperative effort among various groups in or interested in the rural health problem, a move which is destined to provide not only better health standards but better public relations.

13. *Psychology*: The Council has attempted in the past year, without success, to compose the differences of opinion between various groups and organizations seeking standardization and regulation in the field of clinical psychology. This subject has been discussed at length, both in state and national circles, and no answer acceptable to the various groups has yet emerged. Continued attention will be given to this problem.

14. *Veterans' Committee*: The Council has appointed a special committee to meet with veterans' organizations in an effort to secure agreement on health and medical care standards for veterans. It is hoped that these meetings may untangle existing snarls and smooth out misunderstandings in the medical care of veterans entitled to such care.

15. *Conclusion*: This report is designed to cover the principal items considered by the Council during the past calendar year. If additional items arise prior to the 1953 Annual Session, the Council will be pleased to make an additional report thereon.

Respectfully submitted,

SIDNEY J. SHIPMAN, *Chairman*

REPORT OF THE PRESIDENT OF THE TRUSTEES OF THE C. M. A.

To the President and the House of Delegates:

The Trustees of the California Medical Association is a non-profit corporation, wholly-owned by the Association and made up of members who are at all times the members of the C.M.A. Council. The corporation's sole purpose is to hold accumulated assets of the Association, which from time to time may be contributed to the corporation by the

C.M.A. Council out of surplus funds. The corporation has met during the past year in accordance with its legal requirements and its financial statements are printed elsewhere in this issue as a part of the report of the Treasurer.

Respectfully submitted,

LEWIS A. ALESEN, *President*

REPORT OF THE SECRETARY

To the President and the House of Delegates:

The Secretary was reelected by the Council at its meeting on April 30, 1952.

He has attended the various meetings of the Council and Executive Committee and has edited the minutes that were prepared by the Executive Secretary, with the aid of the Legal Counsel and the Chairman of the Council. In addition, the Secretary presided over the meetings of the Committee on Scientific Work, and at the meetings of the section secretaries in arranging for the 1953 convention. This past Interim Session the secretaries of the sections on Medicine and General Surgery arranged for the scientific speakers. Further, the Secretary attended meetings of the Committee on Postgraduate Activities and other committees appointed by the House and Council.

He has been active on the Cancer Commission and the liaison between this Commission and the Council has been materially strengthened by having a mutual member.

The attention of the membership is called to the minutes of the Council and the Executive Committee that are printed in CALIFORNIA MEDICINE. It is strongly recommended that these be read in detail by all members.

Respectfully submitted,

ALBERT C. DANIELS, *Secretary*

REPORT OF THE EXECUTIVE SECRETARY

To the President and the House of Delegates:

Your executive secretary submits herewith his report for the past year, divided into the various activities falling within the duties assigned to him by the Council.

1. *Administrative*: The Association office is currently undergoing alterations and additions. When this work is completed, the office will be one unit, instead of two as in the past, and will provide some 1,200 additional square feet of floor space. The Executive Committee has approved a five-year lease on this space, which will protect the Association against rent increases and the possibility of losing the cost of the necessary construction. The enlarged office will permit a better arrangement of the business functions of the Association and should provide a more efficient operation throughout.

The staff in the main office now consists of the executive secretary, his assistant, an assistant to the editor, an advertising manager, an associate director of public relations and seven office assistants who serve as secretaries, bookkeepers and assistants to the department heads. In the Southern California office are located the director and associate director of public relations. These men have no full-time secretary but use a secretarial service as needed.

There are also three physicians serving part-time in Association activities. These include the Editor, the director of postgraduate activities and the medical director of the Cancer Commission. The latter two employ part-time secretaries. One additional full-time employee serves the Blood Bank Commission in offices maintained in the San Francisco Medical Society headquarters.

The office equipment is in good condition and modern. New equipment is needed continually to care for the ever-

increasing membership records and expanded activities of the Association. At present there ample filing facilities and sufficient typewriters, adding machines, Mimeograph and Addressograph machines to handle the business of the office efficiently and promptly. Some personnel training will soon be needed to handle the telephone switchboard which has now become a necessity and will soon be installed.

2. *Membership:* In accordance with By-Law requirements, the following account of county society members as of November 1, 1952, is given:

MEMBERSHIP—December 31, 1952

Alameda-Contra Costa	1,033
Butte-Glenn	57
Fresno	228
Humboldt	61
Imperial	42
Inyo-Mono	9
Kern	140
Kings	26
Lassen-Plumas-Modoc	20
Los Angeles	4,755
Madera	17
Marin	90
Mendocino-Lake	35
Merced-Mariposa	40
Monterey	122
Napa	55
Orange	222
Placer-Nevada-Sierra	56
Riverside	124
Sacramento	278
San Benito	9
San Bernardino	251
San Diego	553
San Francisco	1,468
San Joaquin	155
San Luis Obispo	59
San Mateo	285
Santa Barbara	157
Santa Clara	377
Santa Cruz	75
Shasta	29
Siskiyou	15
Solano	65
Sonoma	119
Stanislaus	111
Tehama	11
Tulare	80
Ventura	78
Yolo	35
Yuba-Sutter-Colusa	40

11,382

The membership count as of November 1 of each year determines the representation of the county societies in the House of Delegates sessions of the following year. The above list, therefore, has been used in computing county society representation for the 1953 sessions. Each society is entitled to one delegate for each fifty active members or major fraction thereof, with a minimum of two delegates for each.

As to the representation of the Association in the House of Delegates of the American Medical Association, the membership now entitles the C.M.A. to twelve A.M.A. delegates. This is an increase of one delegate from 1952 and places the Association definitely in second place in the A.M.A. House. New York leads with 17 delegates, while Pennsylvania is in third position with 11 and Illinois fourth with 10. At the present rate of growth in the Association's membership it is not unlikely that a thirteenth A.M.A. delegate may be added for 1954.

3. *Meetings:* The executive secretary has attended all meetings of the Council and the Executive Committee. He has attended the two A.M.A. meetings, where he serves as secretary to the California delegation. In company with the President or President-Elect he has visited 25 of the county societies in the past five months. Some of the county meetings have included related meetings of the county auxiliaries.

4. *Financial:* The Association completed its fiscal year ended June 30, 1952, with a balance of \$52,301 of revenues over expenditures. Total revenues, including those for the Journal, came to \$593,855 for the year, compared with a budget of \$566,250 and revenues of \$569,334 for the preceding fiscal year. Total expenditures for 1951-1952 amounted to \$541,554, compared with a budget of \$615,260 and the previous year's total of \$603,613.

CALIFORNIA MEDICINE showed total revenues for the year of \$155,508, including \$117,683 in advertising sales. This compares with a total of 147,477, including advertising revenues of \$111,673, for the preceding fiscal year. Expenditures amounted to \$129,970, leaving a net profit on the Journal of \$25,538. For the 1950-1951 fiscal year, Journal expenses were \$122,493 and net profit was \$24,984.

The Association is in excellent financial condition, as a study of the Report of the Treasurer will show. The corporate holding company closed the 1952 fiscal year with \$23,611 in cash and \$1,105,000 in U. S. Government securities. There were no other assets for the corporation at the year-end and the only liabilities were in segregated accounts and surplus.

Administrative expenses for 1951-1952 totaled \$167,228, an increase of \$19,300 over the preceding fiscal year. Principal increases came in annual meeting expenses and in legal costs involved in litigation. Aside from these two items, the balance of administrative expenses were practically the same as in the preceding year. Expenditures for scientific, educational and public relations activities totaled \$244,356, a decrease of \$88,836 from the preceding year, when \$100,000 was appropriated to the American Medical Education Foundation. Public relations expenditures were \$20,574 higher than in 1950-1951, totaling \$94,236. Conversely, expenditures for public policy and legislation activities were \$39,959 lower, at \$51,908.

The financial history of the Association for the past decade shows a trend toward greater size and greater activity. Until the end of 1945 the dues and other revenues of the Association were pretty evenly balanced by expenditures and reserve funds were extremely nominal. In 1946 and 1947, when membership dues were advanced, expenditures were held to a lower level than revenues and a sizable surplus was accumulated. From 1948 to date, the annual dues have declined per member but increased in the aggregate. The steadily increasing membership has resulted in dues revenues ample to operate the expanded activity of the Association and still return a net balance at the close of almost every fiscal period. For the foreseeable future, the Association may expect a continuation of this trend. Membership totals increase practically every week. Simultaneously, the Association has taken several progressive steps in the fields of medical economics and public relations, programs which have called for the expenditure of relatively large sums of money. Fortunately, revenues have increased at an even faster pace than expenditures, so that the total reserves have been increased steadily.

The Council has approved a policy of reinvesting interest and other available reserve funds in U. S. Treasury bonds and bills, in multiples of \$5,000. This policy has been strictly adhered to, so that all surplus funds are constantly earning interest and growing through compounding.

5. *California Medicine:* The eminently satisfactory financial return of the official Journal for the past fiscal year has been noted above. Since CALIFORNIA MEDICINE was placed on its own advertising feet some six years ago, it has continued to make friends and attract a large volume of advertising. This has made possible a number of improvements in the Journal, typographically and otherwise, without having recourse to general funds for subsidy. The

Journal is not published as a profit venture but it is obvious that profits are preferable to losses and that increased available funds will permit further improvements in the editorial and news sections without disturbing the general financial structure of the Association.

Editorially, CALIFORNIA MEDICINE continues to occupy its high position among state journals. It is widely quoted throughout the country and highly respected in editorial and advertising offices in every state. Its function is to provide the members of the Association and its subscribers with the best available material along scientific, news, organizational and allied lines. It is believed to be doing this today, although the need for constant improvement is never forgotten.

6. *Public Policy and Legislation:* The executive secretary has continued to work with the legislative representatives and committee members whenever called upon. In 1952 the state legislative session was a budget and emergency session only, not requiring much activity on the part of the Association. In the current year the legislative session promises to be one of the busiest in many years and the usual crop of bills must again be reviewed. The Association office is standing by to help out in any manner it may.

7. *Public Relations:* While the executive secretary is not directly in charge of public relations, he is in a position to oversee the operations of that department and to correlate the activities of the Association with those of the public relations team. These activities, as attested by the reactions throughout the county societies, have been productive of much good will. California is looked upon nationally as one of the most progressive state associations in public relations and your executive secretary has been honored by appointment by the Board of Trustees of the American Medical Association to an advisory committee on public relations to the national organization. This appointment has continued for two years and has another year to run; your executive secretary currently serves as chairman of this nine-man committee.

8. *Annual Session:* At this writing, arrangements for the 1953 Annual Session are well along and the meeting promises to be one of the largest and most important in the Association's history. For the first time, a five-day session will be held and this is calculated to permit more time for conducting the business affairs and scientific sessions alike. Technical exhibits will establish a new record high in number and revenues. Again the Association is faced with the difficulty of fitting its meeting into the quarters available, a problem which has existed for several years and which becomes more aggravated each year. The five-day meeting may ameliorate this situation somewhat but the basic problem remains.

9. *Conclusion:* This report would not be complete without a tribute to the officers, Councilors, committee members and other Association members who devote their time so unselfishly to your affairs. The executive secretary sits in the middle of this great activity and can attest from personal observation the tremendous amount of time, energy and talent expended by these many doctors in working for the good of the organization. Without the ready cooperation of these men and women, the work of the Association office would be greatly increased and hampered.

Full credit must also be given to the entire personnel for their willing and efficient services at all times. The Association is fortunate in having a cohesive organization of employees who have served for some years and who can always be relied upon to turn out a good job without prodding. Each takes a real interest in his or her work and performs his own assignments well, as well as assisting others

when the need arises. It would be difficult to single out any individual for special mention in this regard; the entire staff must be mentioned. Mr. Howard Hassard, legal counsel, and Mr. Ben Read, executive secretary of the Public Health League of California, neither of them an employee of the Association, also deserve all possible credit for their great contributions to the efficient and effective working of the organization.

Respectfully submitted,

JOHN HUNTON, *Executive Secretary*

REPORT OF THE EDITOR

To the President and the House of Delegates:

By little and little in the last few years CALIFORNIA MEDICINE has developed a style of presentation intended to make it attractive to as many as possible of its potential readers. A principal aim is to present good material in such a way that any practitioner of medicine, whatever the special or general nature of his medical interests, can easily read any article in your Journal—even one on a subject remote from his usual field—without stumbling over the provincial language of specialization.

To this end it is sometimes necessary in manuscript to supply universally understood terms to take the place of patois that, however acceptable in the specialty in which it has particular meaning, is not at all informative to readers in general. And sometimes sentences are recast in the service of clarity, and sometimes—although no great pretensions can be made in this respect—simply to improve the literary quality.

Such changes are made with the reader uppermost in mind. Care is taken not to change the meaning intended by the author; and authors of course have opportunity to review the revisions before publication. Even so, almost any editor must wonder, now and again, just how far his license extends—must wonder whether in discharging his primary duty to readers, he may not do a disservice to authors or seem to treat them less than courteously.

In quest of at least partial answer, letters were sent to the authors of all articles that appeared in four issues of CALIFORNIA MEDICINE, asking for candid opinion as to whether the revisions of their manuscripts were reasonable and helpful or needless or damaging.

On the whole the answers—a surprise to one who occasionally as an author has had moments of less than kindly feelings toward editors—encouraged rather than rebuked. The range was from reproof to wholehearted sanction. Happily, the preponderance of replies was of the latter order. In addition, some of those who answered made valuable suggestions.

Several changes were made during the year to improve the appearance of your Journal. Headings for the various sections have been dressed up, a more arresting type-face is used for titles of articles, the lines of type in text are a little farther apart for ease of reading, and subheads are set in bolder type for accent.

The number of unsolicited manuscripts received for consideration increased considerably in 1952, as is shown in the following table:

	Annual Session		—Other—		—Printed—	
	Rec'd	Accepted	Rec'd	Accepted	Rec'd	Accepted
1950.....	179	82	114	66	293	148
1951.....	138	89	79	42	217	131
1952.....	143	101	126	84	269	185

The editor has many persons to thank for valuable help. Robert F. Edwards, the assistant to the editor, has continued to do a superb job of preliminary editing of manuscripts, of arranging the set-up of the Journal and of making innumerable helpful suggestions of all sorts. Mrs. Rooney

of the office staff has kept a close watch over and has maintained great interest in all the activities of the headquarters office. For continuing cause the editor is constantly grateful to members of the Editorial Board, to whom has fallen the task of reviewing and appraising an increasing number of manuscripts. That their work may not go wholly unrecognized by those they serve, it is suggested that all members of this Association read the list of Editorial Board members which is printed on Advertising Page 2. The editor's gratitude goes also to many others who have reviewed books, have given special advice about manuscripts and have prepared material on assignment.

Respectfully submitted,

DWIGHT L. WILBUR, *Editor*

REPORT OF LEGAL DEPARTMENT

To the President and the House of Delegates:

The Legal Department submits the following report covering the interval between the 1952 Annual Session and the time of presentation of this report, February 1953:

During the past year we have attended all meetings of the House of Delegates, Council, and Executive Committee, as well as meetings of the C.P.S. Study Committee, Medical Services Commission, and other committees and agencies of the Association. The number of committees and agencies and the time required in attendance at various meetings increases each year.

We have also prepared and submitted opinions on a variety of subjects, as requested by the Association or its officers or component societies.

In addition to our advisory services, we have also undertaken, at the instance of the Council, the following:

1. Physicians' liability cases:

As amici curiae we appeared in the case of *Pierce vs. Linde*, on the question of whether a physician practicing in another state (Nevada) is legally qualified to act as an expert witness in California. The case was pending before the appellate court at the time of our last report. Since then it has been decided in favor of the ruling of the trial judge that the physician from out of the state was not sufficiently qualified to act as an expert witness in California. The decision, however, did not eliminate entirely the possibility of out-of-state physicians acting as experts in malpractice cases. The court limited its decision to the fact that the particular witness was not acquainted with the standards of orthopedic surgery in the San Francisco Bay area.

2. Unlicensed practice:

Since our last report to the House of Delegates in connection with *Complete Service Bureau et al. vs. San Diego County Medical Society, et al.*, we have filed an appeal from the decision of the trial judge, holding that Complete Service Bureau was not engaged unlawfully in the corporate practice of medicine. Our appeal is now pending before the District Court of Appeal, Fourth Appellate District, and the appellants' opening brief has been prepared, printed and filed. The appeal involves two very important questions of law: First, whether or not a group of physicians practicing in a community have the legal right to apply for an injunction against unlicensed practice by others; and second, if there is a right of action for an injunction, do the activities of Complete Service Bureau and its management constitute corporate practice of medicine, and hence "unlicensed practice."

As to the first question, there are decisions in other states that permit lawyers, physicians, and dentists to enjoin unlicensed practice, on the ground that licensed physicians, attorneys or dentists have a legal right to be protected from

invasion of their particular professions by those who are unlicensed. However, it has never been directly decided in California whether or not such a right of action exists here. The California Supreme Court has inferred an affirmative answer, but it has not directly ruled.

The second question of law turns on whether or not a closed panel group can use the term "nonprofit" and thus evade the rule against the corporate practice of medicine. If it is possible so to do, there is then a very serious loophole in the long-established rule of law that corporations and other artificial legal entities may not practice one of the learned professions by hiring physicians, dentists or attorneys to render services for them.

The original complaint filed by Complete Service Bureau, claiming damages and alleging that the San Diego Medical County Society and its members had in some manner violated the anti-trust laws, has not as yet come to trial.

3. Legislation:

The 1953 regular session of the Legislature commenced early in January, and for the first two weeks the legislators introduced bills and then recessed until February 24. Over five thousand bills were introduced, each of which must be carefully read to determine whether or not it affects the medical profession. This, as you can well understand, is a terrific job. To date, approximately three hundred bills have been found to affect the practice of medicine in one way or another. At the present time we are analyzing each of these bills to determine whether to recommend to the Legislative Committee approval or disapproval, and to determine whether amendments are necessary in the interest of the public health.

At the annual session, a more detailed report will be given by the Legislative Committee:

4. District hospitals:

In conjunction with Mr. Glenn Gillette, of the Public Relations Department, we have counseled and advised a number of county medical societies and groups of physicians with respect to the establishment of adequate minimum staff standards in district hospitals, and with respect to both statutory and case law governing the operations of publicly owned hospitals. This subject involves a number of delicate problems, both in the field of law and public relations. The medical profession must understand that if hospitals for the care of the general public, as distinguished from the indigent, are to be built and operated by public agencies, then inevitably the establishment and maintenance of adequate standards for the protection of the health of the public will involve political considerations in addition to the factors of health, education and safety.

5. Industrial fee schedule:

During the year we have worked closely with the Association's Industrial Fee Committee, with Dr. Francis J. Cox as chairman, have attended hearings before the Senate Interim Committee on Workmen's Compensation, as well as conferences with insurance representatives, and have, at the request of the committee, prepared and submitted opinions relating to various phases of industrial medicine.

6. Private pay clinics—fictitious names:

Approximately a year ago the State Board of Medical Examiners and the Department of Public Health and the California Medical Association commenced to study the overlapping effect of the Medical Practice Act and the Clinic Law (originally enacted in 1933). The Medical Practice Act forbids the use of any fictitious name or any name other than his own by any physician in connection with his practice. On the other hand, the Clinic Law permits the establishment and maintenance of private pay clinics with the

use of fictitious names. The Clinic Law also provides that it in no way modifies or changes the Medical Practice Act. Also, the Clinic Law applies to clinics operated by chiropractors or osteopaths or chiropractors, as well as clinics operated by doctors of medicine.

Over the years, a number of private pay clinics have been formed by medical groups. These clinics have obtained licenses from the Department of Public Health and have used fictitious names, thus raising a serious legal question as to whether violations of the Medical Practice Act have occurred. After full consideration of all of the factors, it was felt that it would be most unwise to attempt to undertake a rigid enforcement of the fictitious name sections of the Medical Practice Act, in so far as medical groups operating in good faith under clinic licenses are concerned. On the other hand, it was felt that for the future, the law should be fully clarified, and that the use of the term "clinic" should be restricted, in substance, to charitable, teaching and research institutions. At the same time, it was recognized that group practice of medicine is a lawful method for engaging in private practice, and that physicians in groups should not be required to use awkward lengthy titles, including each and every name. Accordingly, the Clinic Act was redrafted to strengthen its provisions relating to charitable, teaching and research institutions, and to eliminate entirely the private pay clinic for the future (without interfering with those now in existence). The Medical Practice Act fictitious name sections were redrafted to add an express recognition of medical groups, and to incorporate a provision that groups of physicians may use a common name containing the surname of one or more of the partners and the phrase "Medical Group." The revised Clinic Law and revised fictitious name sections of the Medical Practice Act are now pending before the Legislature.

7. County society by-laws:

During the year, we reviewed and submitted opinions to several county medical societies in connection with the by-law revisions.

The foregoing merely outlines briefly a few of the major activities in which we have engaged on behalf of the Association. There are a number of other items that to include would unduly lengthen this report.

Throughout the year we have endeavored to be of service to the Association, its officers and committees, the House of Delegates and the Council, and the various county societies. In addition to the writer of this report, Mr. George A. Smith and Mr. Alan L. Bonnington, in our San Francisco office, and Mr. Louis M. Welsh, of our Los Angeles office, have contributed generously of their time in carrying out the functions of the Legal Department. It has always been a pleasure to be of service.

Respectfully submitted,

PEART, BARATY & HASSARD
By HOWARD HASSARD

REPORT OF THE TREASURER

To the President and the House of Delegates:

The Treasurer was reelected by the Council in May, 1952. The actual duties of this office are nominal, the real handling of monies being performed by the office staff at 450 Sutter Street, San Francisco. All of these employees are bonded, as well as the officers of the Association.

The incoming monies of the accounts are kept in a manner recommended by the auditing firm of John F. Forbes and Company, who also check the presence of cash, securities and other assets, and certify to these.

Submitted herewith is the series of accounts for the fiscal year July 1, 1951 to June 30, 1952. Members are urged to study these accounts for a true picture of the Association's financial situation.

Respectfully submitted,

ALBERT C. DANIELS, *Treasurer*
(Balance sheets and statements of income
and expenditures appear on following pages.)

CALIFORNIA MEDICAL ASSOCIATION

BALANCE SHEET, JUNE 30, 1952

ASSETS

CASH		\$ 44,162.83
ACCOUNTS RECEIVABLE		6,717.42
LOAN RECEIVABLE—NEW MEXICO PHYSICIANS' SERVICE.....	\$ 9,250.00	
Less Reserve	9,250.00	
Remainder		
OTHER LOANS RECEIVABLE.....	\$89,944.50	
Less Reserve	88,671.50	
Remainder		1,273.00
INVESTMENT IN U. S. TREASURY BILLS (at cost).....		298,735.00
CASH SURRENDER VALUE OF LIFE INSURANCE POLICIES.....		8,649.04
TRUST FUND (contra).....		4,183.01
FURNITURE AND FIXTURES (at nominal value).....		1.00
DEFERRED CHARGES		3,098.67
DEPOSITS		2,006.60
TOTAL		<u>\$368,826.57</u>

LIABILITIES

ACCOUNTS PAYABLE		\$ 14,918.85
ACCRUED EXPENSES:		
American Medical Association—Delegates' and Other Expenses.....	\$ 3,433.19	
Organization Expense	17.02	
Committees' and Sundry.....	6,705.12	
Pay Roll Taxes.....	441.20	
TOTAL		10,596.53
TRUST ACCOUNT—PHYSICIANS' BENEVOLENCE FUND (contra).....		4,183.01
DEFERRED INCOME—PREPAID ADVERTISING.....		1,078.53
SURPLUS, EXHIBIT A.....		338,049.65
TOTAL		<u>\$368,826.57</u>

EXHIBIT A

SURPLUS CREDITS:		
Reduction in Reserve for New Mexico Physicians' Service Loan.....	\$ 1,500.00	
Reduction in Reserve for Loans to Blood Banks.....	17,328.50	
Increase in Cash Surrender Value of Life Insurance Policies.....	3,804.51	
Other	425.00	
TOTAL	\$ 23,058.01	
OPERATING SURPLUS FOR FISCAL YEAR.....		52,300.98
TOTAL		<u>\$ 75,358.99</u>
SURPLUS CHARGES:		
Expenses Applicable to a Prior Period.....	\$ 228.61	
To Set Up Reserves for Loans Made to Blood Banks During the Period Ended June 30, 1952.....	36,000.00	
TOTAL	\$ 36,228.61	
INCREASE IN SURPLUS FOR THE YEAR.....		\$ 39,130.38
SURPLUS, JULY 1, 1951.....		298,919.27
SURPLUS, JUNE 30, 1952.....		<u>\$338,049.65</u>

CALIFORNIA MEDICAL ASSOCIATION

INCOME AND EXPENDITURES FOR THE FISCAL YEAR ENDED JUNE 30, 1952

INCOME

	Fiscal Year Ended June 30		Increase
	1952	1951	Decrease
1. Membership Dues (exclusive of Journal Allocation).....	\$412,378.91	\$395,808.56	\$ 16,570.35
2. Annual Session	20,055.00	18,805.00	1,250.00
3. Miscellaneous Income	3,257.63	4,865.41	1,607.78
4. Interest Income	2,656.00	2,377.61	278.39
TOTAL REVENUES	\$438,347.54	\$421,856.58	\$ 16,490.96

EXPENDITURES

5. A.M.A. Delegates' Expense.....	\$ 10,481.37	\$ 20,302.26	\$ 9,820.89
6. Annual Session Expense.....	31,174.35	23,249.89	7,924.46
7. Employees' Annuities	5,173.32	3,608.52	1,564.80
8. Council—Executive Committee Meetings.....	2,194.95	2,367.59	172.64
9. Equipment Expense	3,940.89	2,014.65	1,926.24
10. Legal Department	12,065.15	16,268.10	4,202.95
11. Los Angeles Office Expense.....	1,897.91	2,109.51	211.60
12. Miscellaneous Expense	80.25	237.11	156.86
13. Office Supplies and Expense.....	6,076.07	4,598.44	1,477.63
14. Organization Expense	21,780.37	10,394.45	11,385.92
15. Rent	5,686.96	5,630.28	56.68
16. Telephone and Telegraph.....	2,354.02	1,967.83	386.19
17. Payroll Tax Expense.....	2,193.21	1,519.86	673.35
18. Pensions	4,260.00	4,260.00	.....
19. Postage	1,067.48	900.12	167.36
20. Salaries:			
(a) Administrative	30,508.40	30,238.62	269.78
(b) Clerical	12,408.40	10,133.48	2,274.92
21. Secretarial Conference	1,145.31	1,117.26	28.05
22. Office Improvements	1,325.51	.....	1,325.51
23. Travel Expenses:			
(a) Officers	351.23	219.10	132.13
(b) Council—Executive Committee	7,605.07	6,040.71	1,564.36
24. Woman's Auxiliary	1,750.00	750.00	1,000.00
25. Student A.M.A.	1,708.05	.....	1,708.05

SCIENTIFIC, EDUCATION AND PUBLIC RELATIONS:

26. Department of Public Relations.....	94,236.37	73,661.92	20,574.45
27. Public Policy and Legislation.....	51,907.80	67,863.31	15,955.51
28. Cancer Commission	15,201.50	11,004.07	4,197.43
29. Committees' Expense	48,206.51	27,842.65	20,363.86
30. Los Angeles Special Appropriation.....	.....	24,003.56	24,003.56
31. Postgraduate Committee	15,900.05	12,972.91	2,927.14
32. Contributions to Benevolence Committee.....	10,935.75	10,562.50	373.25
33. Donations to Medical Libraries.....	5,467.88	5,281.24	186.64
34. American Medical Education Foundation.....	.....	100,000.00	100,000.00
35. Student Nurse Recruitment.....	2,500.00	.....	2,500.00
TOTAL EXPENSES	\$411,584.13	\$481,119.94	\$ 69,535.81
Surplus or Loss.....	\$ 26,763.41	\$ 59,263.36	\$ 86,026.77
CALIFORNIA MEDICINE Surplus.....	25,537.57	24,984.50	553.07
COMBINED SURPLUS OR LOSS.....	\$ 52,300.98	\$ 34,278.86	\$ 86,579.84

CALIFORNIA MEDICINE
Official Journal of the California Medical Association

INCOME AND EXPENDITURES FOR THE FISCAL YEAR ENDED JUNE 30, 1952

	INCOME		Increase Decrease
	Fiscal Year Ended June 30 1952	1951	
1. Advertising Sales	\$117,683.06	\$111,672.70	\$ 6,010.36
2. Subscriptions (Non-Members)	2,609.20	2,452.89	156.31
3. Subscriptions Allocated from Dues.....	34,660.50	32,943.00	1,717.50
4. Reprint Sales (Net).....	554.75	408.90	145.85
TOTAL REVENUES	\$155,507.51	\$147,477.49	\$ 8,030.02
EXPENDITURES			
5. Printing	\$ 84,623.25	\$ 82,492.46	\$ 2,130.79
6. Illustrations	1,630.64	1,721.82	91.18
7. Advertising Sales Expense.....	14,667.16	10,779.73	3,887.43
8. Advertising Discounts and Collection Expense.....	2,114.19	1,974.32	139.87
9. Addressograph Expense	1,703.94	1,816.98	113.04
10. Postage and Mailing.....	4,499.02	4,362.02	137.00
11. Rent	2,744.68	1,956.00	788.68
12. Telephone and Telegraph.....	1,046.65	1,161.71	115.06
13. Salaries	16,795.04	15,480.25	1,314.79
14. Office Supplies and Sundry Expense.....	145.37	747.70	602.33
TOTAL EXPENSES	\$129,969.94	\$122,492.99	\$ 7,476.95
Surplus	\$ 25,537.57	\$ 24,984.50	\$ 553.07

TRUSTEES OF THE CALIFORNIA MEDICAL ASSOCIATION
(A California Corporation)

BALANCE SHEET, JUNE 30, 1952

ASSETS		
CASH (including Trust Funds).....		\$ 23,610.89
INVESTMENTS (including Benevolence Fund Investments).....		1,105,000.00
TOTAL		<u>\$1,128,610.89</u>
LIABILITIES		
TRUST ACCOUNTS:		
Benevolence Fund	\$ 45,301.43	
Morris Herzstein Bequest Fund.....	6,141.69	
Total Trust Accounts.....		\$ 51,443.12
ENDOWMENT FUND		276.74
SURPLUS:		
Contributed Surplus	\$882,915.99	
Earned Surplus:		
Balance, June 30, 1951.....	\$167,631.44	
Add—Adjustment for Bond Premium Applicable to Bond Purchases During the Fiscal Year Ended June 30, 1951.....	45.32	
Adjusted Balance, June 30, 1951.....	\$167,676.76	
Net Income for Year, Exhibit B.....	26,298.28	193,975.04
Total Surplus		1,076,891.03
TOTAL		<u>\$1,128,610.89</u>

EXHIBIT B

TRUSTEES OF THE CALIFORNIA MEDICAL ASSOCIATION

STATEMENT OF INCOME FOR THE YEAR
ENDED JUNE 30, 1952

INCOME—INTEREST ON BONDS.....		\$ 26,369.87
EXPENDITURES:		
Audit Fee	\$ 300.00	
Custodian Fee	308.76	
Miscellaneous	115.02	
TOTAL		723.78
REMAINDER		\$ 25,646.09
ADD—THE EXCESS OF MATURITY VALUE OF BONDS, PURCHASED DURING THE YEAR, OVER THE COST CHARGED TO THE BOND ACCOUNT, TO REFLECT MATURITY VALUE OF THE BONDS.....		652.19
TOTAL		\$ 26,298.28

REPORTS OF DISTRICT COUNCILORS

FIRST COUNCILOR DISTRICT

San Diego County

To the President and the House of Delegates:

During the past year I have attended the meetings of the Council, and the Interim meeting of the House of Delegates, the minutes of which have been duly reported in CALIFORNIA MEDICINE. I have served with great interest on the C.M.A.-C.P.S. Study Committee; the final report of this committee has been made available to the membership.

The San Diego County Medical Society has continued its growth. The Blood Bank, a member of the California State Blood Bank, has shown continued growth and efficiency in supplying the civilian and military needs of the community.

It is my continued desire to correlate the activities of the state association with the county society.

Respectfully submitted,

FRANCIS E. WEST, *Councilor,*
First District

SECOND COUNCILOR DISTRICT

Imperial, Inyo, Mono, Orange, Riverside and San Bernardino Counties

To the President and the House of Delegates:

The visitation of President-elect John Green, Public Relations Director Ed Clancy, and Public Health League Director Ben Read to the Inyo-Mono County Medical Association was well received by the membership. Present at this meeting in addition to the membership were the Medical Auxiliary and the dentists.

President Lewis Alesen and Associate Public Relations Director Jerry Pettis were enthusiastically received by the membership and Auxiliary of Riverside, Orange and San Bernardino counties. Their visitations are not only pleasingly informative to their audiences but stimulate a desired interest in the problems of C.M.A.

The Orange County Medical Association has volunteered its services to examine all the Boy Scouts expected in that area for the National Jamboree in July. Approximately 50,000 Boy Scouts are expected. This public relations gesture and service by Orange County doctors will be appreciated by all the doctors of California.

Riverside and San Bernardino counties have successfully launched a Bi-County Blood Bank in close cooperation with Dr. John Upton. The bank is successful in service and public relations, and in addition is financially sound.

Councilor-at-Large Dr. Arthur Varden and myself are trying through frequent visitations to the societies in our districts to keep our doctors informed of C.M.A. problems and to acquaint ourselves with local problems, so that in turn we may better represent them in the House of Delegates and at the Council.

The Council continues to function effectively under the able leadership of Dr. Sidney J. Shipman.

The published reports and proceedings of the Council are in your possession in CALIFORNIA MEDICINE.

Respectfully submitted,

OMER W. WHEELER, *Councilor,*
Second District

THIRD COUNCILOR DISTRICT

Los Angeles County

To the President and the House of Delegates:

I have attended all of the meetings but one of the Council during the last year and I wish to state that as far as I can

see, the operations of the California Medical Association are in good condition.

Respectfully submitted,

H. CLIFFORD LOOS, *Councilor,*
Third District

FOURTH COUNCILOR DISTRICT

Los Angeles County

To the President and the House of Delegates:

The changes in the constitution of the California Medical Association and the Los Angeles County Medical Association have had a year's trial and there seems to be a general acceptance by the doctors of the changes made.

There is a wider interest in the districts in the political affairs of medicine.

The new public relations meetings instituted by the California Medical Association have been well attended and political affairs have been better understood. The untiring work of the personnel of the California Medical Association and its officers have been an inspiration to all of us.

Respectfully submitted,

J. PHILIP SAMPSON, *Councilor,*
Fourth District

FIFTH COUNCILOR DISTRICT

San Luis Obispo, Santa Barbara and Ventura Counties

To the President and the House of Delegates:

As Councilor for the Fifth District I have attended all the meetings of the Council of the California Medical Association during the past year. I have attended all of the meetings of the Board of Trustees of the California Physicians' Service since my appointment to the board as a representative of the Council. I appeared before the members of the Senate Interim Committee, of the State of California, which was studying the problem of rehabilitation of the physically handicapped, as a representative of the Council.

I accompanied President Alesen and members of the Public Relations Department on their visits to local societies. It is the general consensus of opinion in this area that these visits are well worth continuing although it places an additional burden on the persons making these visits.

All of the component county societies in this district have started active public relations programs. Initial comments on this phase of our activities have been favorable in most instances.

The Tri-Counties Blood Bank continues to operate successfully. The volume of blood handled has increased to such an extent that it has become necessary to find larger quarters. The present plan is to build a new building. It is to be constructed so that some of the rooms can be rented for office space if the national blood program is halted.

The cooperation of the officers and members of the component societies on problems of mutual interest has been excellent.

Respectfully submitted,

A. A. MORRISON, *Councilor,*
Fifth District

SIXTH COUNCILOR DISTRICT

Calaveras, Fresno, Kern, Kings, Madera, Mariposa, Merced, San Joaquin, Stanislaus, Tulare and Tuolumne Counties

To the President and the House of Delegates:

During the past year I have attempted to attend all meetings of the Council, and have tried to visit different societies in the Sixth District. The district is rather large, from Bak-

ersfield to Stockton. I have not been able to attend as many of the county meetings as I would have liked.

All of the counties have taken an active part in the political set-up in the local community and have had very little trouble in the past year.

Respectfully submitted,

NEIL J. DAU, *Councilor, Sixth District*

SEVENTH COUNCILOR DISTRICT

Monterey, San Benito, San Mateo, Santa Clara, and
Santa Cruz Counties

To the President and the House of Delegates:

The Seventh District has again seen a moderate increase in the number of medical men in the district. Two of the counties are now entitled to additional delegates and alternates to the House of Delegates.

In the field of voluntary health insurance the Seventh District has always maintained a very active interest and this year several members of the Committee on Prepaid Health Care of the C.M.A. are from this district. Santa Clara County has offered to try out a new deductible type of policy for C.P.S. and Santa Clara County has also established one of the local C.P.S. clearing stations for local insurance adjustments.

Building programs for new medical facilities are going ahead in several counties. San Mateo County has just voted bonds for a new county hospital. The district hospital in Millbrae is within a year of completion. The Santa Clara Medical Society has voted to purchase land on which to erect a permanent home for the society.

In a number of counties there has been an increased co-operative spirit between the supervisors, the county health departments and the county medical society. This has led to revision in some instances of ordinances and provisions of county government that have led to better medical conditions in the county.

As industrialization of the Seventh District continues we know that our medical problems are to increase and plans are under way in several counties to study smog control, school programs, medical plans for unions, group practice, housing, drainage, emergency stations and others that come with the increases in population.

Respectfully submitted,

HARTZELL H. RAY, *Councilor,*
Seventh District

EIGHTH COUNCILOR DISTRICT

San Francisco County

To the President and the House of Delegates:

The San Francisco Medical Society has had another very active year. The membership continues to grow steadily.

In pursuance of the established policy of helping the patient to better medical care much attention has been given to improving the understanding between physician and patient. A feature of this program has been a study by a committee headed by President-elect Samuel R. Sherman of the needs of groups of organized labor. In part as a result of these studies the society has been investigating the feasibility of preparing a list of fees for guidance of its membership. It has proved to be a very complex problem.

Anticipating the need for better facilities for the membership the society's board of directors has purchased a very attractive site for the development of new headquarters.

President Edmund J. Morrissey, his officers and the new board of directors and our membership in the House of Delegates together with a fine group of committeemen have launched upon a vigorous and active program.

The membership will be assured of continuation of the society's effective voice in California Medical Association affairs.

Respectfully submitted,

M. LAURENCE MONTGOMERY, *Councilor,*
Eighth District

NINTH COUNCILOR DISTRICT

Alameda and Contra Costa Counties

To the President and the House of Delegates:

Activity of the Alameda-Contra Costa Medical Association during 1952 included preliminary work and study concerning a new headquarters building to house its offices, blood bank, and Bureau of Medical Economics. An architect was engaged, site studies were made, and plans for the building are now out for bid. It is hoped that the building will be ready for occupancy in mid-1953.

The services of our executive secretary were lent to the C.M.A.-C.P.S. Study Committee which rendered a final report in December to the C.M.A. House of Delegates.

A detailed study was made by the medical association of the need for additional hospital beds in central Contra Costa County, and its results embodied in a report and request for Hill-Burton funds for the Concord Hospital District.

The general activity of the association and its members included continuation of its work in providing "medical care for all, regardless . . ." and continuation and expansion of its broad public service program in Alameda and Contra Costa counties.

Respectfully submitted,

DONALD D. LUM, *Councilor,*
Ninth District

TENTH COUNCILOR DISTRICT

Del Norte, Humboldt, Lake, Marin, Mendocino, Napa, Solano
and Sonoma Counties

To the President and the House of Delegates:

The year 1952 saw no unusual problems that concerned the Councilor of the Tenth District, although quite a bit of time was spent in attention to routine problems, and general social contacts that are part of the functions of a Councilor. As usual these were pleasant obligations, and for the most part, it was possible to take care of them with dispatch.

In the great majority of instances it was possible to go to the various county meetings of my district, to get to know the different members of the county and its officers, and to have the pleasure of introducing the visiting officials from the C.M.A. in their annual tour of the northern part of the state.

At Santa Rosa we were fortunate to be guests at the home of Horace Sharrocks for a hour or so, before the regular Sonoma County Medical Association meeting. Dr. Sharrocks lives in Vacaville, and the early hour was particularly unusual since it coincided with a brisk storm and blacking out of all electricity, so that the cordial atmosphere of a candlelight cafe existed during our brief stay in his lovely home. We proceeded thereupon to Santa Rosa where a thoroughly successful county medical society meeting was had. There were certain preliminary business activities that had to be carried out by the society first, including the voting for the election. Thereupon our visiting delegation of the C.M.A. spoke briefly and ended the program by showing the film put out by the Mechanics Union entitled "Without Fear."

An especially pleasurable function during the year was the meeting in Guerneville at the home of Dr. Makaroff

who had the District Councilor and several officers from local county societies at a function at his home. An outside barbecue was held and what was particularly important, the Sonoma Society had made an effort to invite local newspaper men as well as the different representatives of the legislature. This was a most successful afternoon with the wives being present, and with everyone having a thoroughly cordial meeting. I feel that such incorporation of newspaper men and governing representatives is a most worthwhile policy for every medical group. It preferably should be part of every county activity at least once a year, since the best way to have friends is to meet them, get to know them personally, and let them come to know that the doctors are friendly human beings whose problems are no more obscure or mysterious than any other professional segment of a society, and men who are most anxious to remain on cordial open terms with their fellow citizens.

At the Napa County Society the meeting proper was held at the home of President Dale Barber. As is usual at that time of year and in that area of the Bay, the lovely evening and afternoon permitted the festivities to be held out beneath the large oak tree in his yard where he has barbecue pits and large generous tables. The delegation from the C.M.A. was most cordially welcomed and encountered many old friends. After the dinner we went into Dr. Barber's spacious home where Dr. Green gave a stirring address on medical ethics, the obligation of the medical societies to help subsidize medical education, and the many benefits which could be derived and are derived from such active support of medical education.

The meeting at Vallejo was of course particularly auspicious, since it is the home county, Solano, of President-elect Green. This meeting was attended also by Dr. Dwight Murray, and we had the further pleasure of having attendant at the meeting the wives of the Auxiliary. Particularly stirring testimonials and congratulations were expressed by the visitors and members of the society who were anxious to honor and observe with pleasure the high station that their fellow member, Dr. Green, has attained. He responded by a carefully selected, sobering, and scholarly address on the obligations of a president, the many problems that face him, and the many duties that medical men have in supporting the activities of the C.M.A. and in particular with helping with the foundation for medical education.

I was unable to join the group in their trip up to Eureka for the meeting of the Humboldt County Society; however, it was possible to proceed with the C.M.A. delegation to Ukiah for the meeting of the Mendocino-Lake County Medical Society. That society has the advantage of not being too large, and thus lending an air of direct contact and personal rapport between the visiting delegation from the C.M.A. and the members of that society. Thus a most pleasant evening was had at that society, although unfortunately the program did start rather late, because of the inclement weather, which slowed part of the delegation, so that they were an hour and a half late. At that Ukiah meeting, before the formal meeting, there was a broad discussion of the standard fee schedule which had recently been adopted at the C.M.A. interim meeting. The members were very anxious to formulate their own ideas as regards to a proper fee schedule. Their general sentiment was in favor of a step in this direction, and they only were desirous of having the further steps made with due caution and circumspection.

The last meeting to be held, namely, the Marin County Society, which is the home county of your Councilor, will be in the latter part of February. We look forward to this meeting which has always been most worthwhile and very well received by our members. After that meeting the formal "round robin" visiting activities of your Councilor will be over, but it will then be spring and time to direct atten-

tion to the coming Council meeting later on in February, and to the quickly arriving regular session of the C.M.A. It has been a most worthwhile year from my point of view, in that it is my freshman year, and I of necessity have had to learn the ropes, meet new faces, make new acquaintances, and to try to properly represent the problems and attitudes of my district.

Respectfully submitted,

WARREN L. BOSTICK, *Councilor,*
Tenth District

ELEVENTH COUNCILOR DISTRICT

Alpine, Amador, Butte, Calusa, Eldorado, Glenn, Lassen, Madac, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, Yolo and Yuba Counties

To the President and the House of Delegates:

During 1952 several new hospitals, or additions, were opened in the area comprising the Eleventh Councilor District and in several communities additional hospital beds are in the planning stage. New doctors have continued to locate in the twenty counties comprising this area, and medical facilities are adequate. In three counties cultists made aggressive attempts to obtain hospital staff privileges, and were successful in Amador County where the county board of supervisors opened the county hospital to osteopaths and appointed an osteopath county health officer. To date relatively few men established in practice have entered the armed services, but the calling of doctors in the remaining priorities under the present law and regulations may cause some dislocations, especially in rural areas having few physicians. The program of the Committee on Postgraduate Activities was expanded during the year in a successful attempt to reach more doctors who are away from medical centers, and, considering the amount of money expended, this is possibly one of the most valuable activities of the C.M.A.

Respectfully submitted,

WAYNE POLLOCK, *Councilor,*
Eleventh District

REPORTS OF COUNCILORS-AT-LARGE

The report of Dr. Sidney J. Shipman as Councilor-at-Large is made a part of his report as Chairman of the Council.

To the President and the House of Delegates:

I have attended and participated in all Council meetings since my election and of the several committees assigned.

Respectfully submitted,

H. L. CAREY, *Councilor-at-Large*

To the President and the House of Delegates:

It has been my pleasure to be in regular attendance at the Council meetings for the year 1952.

I feel that your Council has attacked the various problems with great thought and positive action, and that we closed the year 1952 with a good record of achievement.

Respectfully submitted,

BEN FREES, *Councilor-at-Large*

To the President and the House of Delegates:

Since my election to the Council to fill an unexpired term of one year, I have been active in all Council meetings and have deliberated over the various problems which have involved the California Medical Association.

Recently I was appointed chairman of the Insurance Committee of the California Medical Association. My first assignment is to evaluate the various plans for health and accident group insurance. If the Council acts favorably, on what appears to be a suitable plan, eventually there will be group health and accident insurance available to all members of the California Medical Association. Certain questions have arisen regarding malpractice insurance which perhaps will be evaluated in greater detail in the future if necessary.

Respectfully submitted,

ARTHUR A. KIRCHNER, *Councilor-at-Large*

To the President and the House of Delegates:

As Councilor-at-Large I have attended the meetings of the Council of the California Medical Association and have taken part in the discussions and decisions of the Council. I have also carried out committee and other assignments.

In addition, as director of the San Francisco County Medical Society, I have endeavored to correlate state and county organizations.

Respectfully submitted,

IVAN C. HERON, *Councilor-at-Large*

To the President and the House of Delegates:

During the past year I have attended the Council meetings and have visited, along with the C.M.A. officers, county medical societies in Southern California. The reports of the Industrial Accident Fee Committee, the special C.P.S. Study Committee, public relations, and numerous legislative matters have been outstanding among the many important as well as routine items of business to come before the Council. They were all studied, discussed, and acted upon in the best judgment of the Council.

The published reports and proceedings of the Council meetings indicate the large number of vital problems and the serious thought that has been given them and all affairs of the Association by the elected officers and employees.

Respectfully submitted,

ARTHUR E. VARDEN, *Councilor-at-Large*

REPORTS OF COMMITTEES

EXECUTIVE COMMITTEE

To the President and the House of Delegates:

The Executive Committee has held meetings between Council meetings and such special meetings as were necessary.

The increasing number of problems of the California Medical Association has gradually placed more responsibility upon the Executive Committee. In addition to matters that have been referred by the Council, numerous emergencies arise requiring prompt action by the Executive Committee. Routine matters as well have been handled by the Executive Committee in an effort to shorten the crowded agenda of the Council.

All actions are subject to confirmation by the Council and subsequently published in CALIFORNIA MEDICINE.

Respectfully submitted,

DONALD D. LUM, *Chairman*

COMMITTEE ON ASSOCIATED SOCIETIES AND TECHNICAL GROUPS

To the President and the House of Delegates:

There have been no meetings of the committee during the past year and no communications have reached me as

chairman of the committee from the California State Nurses' Association or from any other society or technical group.

Respectfully submitted,

ROBERT A. SCARBOROUGH, *Chairman*

AUDITING COMMITTEE

To the President and the House of Delegates:

The budget for the fiscal year 1952-1953 was presented to the Council at the annual meeting in Los Angeles, in April 1952.

The budget for 1953-1954 is now under preparation and will be presented at the next annual meeting. Expenditure items were reviewed month by month.

An audit by our certified public accounting firm found all records of the California Medical Association in good order.

Respectfully submitted,

DONALD D. LUM, *Chairman*

COMMITTEE ON HISTORY AND OBITUARIES

To the President and the House of Delegates:

It is fitting that we pause in our busy routine and pay a tribute to our confreres who have passed on to their final reward in 1952. One hundred and thirty-one have been listed in our central office from every section of the state and practically from every field of medicine.

Several were men of outstanding ability and eminently successful; some were relatively unknown, and the great majority had won a place in their respective communities that will be very difficult to fill.

We are proud of the fine record these confreres have made. May we continue to hold our standards high and carry on in the finest traditions of our profession.

Respectfully submitted,

DEWEY R. POWELL, *Chairman*

COMMITTEE ON HOSPITALS, DISPENSARIES, AND CLINICS

To the President and the House of Delegates:

The Committee on Hospitals, Dispensaries and Clinics, which is an advisory committee, has completed its assignments and presented its reports to the proper authorities.

Respectfully submitted,

JOHN B. HAMILTON, *Chairman*

COMMITTEE ON INDUSTRIAL PRACTICE

To the President and the House of Delegates:

In 1952 there were no meetings of the Committee on Industrial Practice.

Respectfully submitted,

R. M. WALLERIUS, *Chairman*

COMMITTEE ON MEDICAL DEFENSE

To the President and the House of Delegates:

The only matter coming before the Committee on Medical Defense this year has been that which dealt with Lloyds of London exempting alleged malpractice claims where such were the result of intraspinal anesthesia or attempts at intraspinal anesthesia. The matter has been brought before the committee and further action will probably be necessary.

Respectfully submitted,

H. CLIFFORD LOOS, *Chairman*

COMMITTEE ON MEDICAL ECONOMICS

To the President and the House of Delegates:

Since the Dichter Report, entitled "Doctor and Patient," was published and sent to all members of the California Medical Association last year no material has been submitted to our committee.

The committee held no meeting throughout the year and has no report to make at this time.

Respectfully submitted,

L. H. FRASER, *Chairman*

COMMITTEE ON MEDICAL EDUCATION AND MEDICAL INSTITUTIONS

To the President and the House of Delegates:

No problems have been referred or forwarded to this committee and there was no unfinished business. The committee has, therefore, not met. The committee stands ready to meet and be of assistance at any time that problems within its field come to the attention of the officers or House of Delegates.

Respectfully submitted,

LEWIS T. BULLOCK, *Chairman*

PHYSICIANS' BENEVOLENCE COMMITTEE

To the President and the House of Delegates:

The Benevolence Committee has continued its regular activities during the past year and has extended aid to physicians in several areas of the state. In addition, it has participated in the benevolences carried on throughout the year by the Physicians' Aid Association of the Los Angeles County Medical Association.

One beneficiary was removed from the committee's list during the year, when he was aided in being placed in a state home where he can receive needed medical attention. Another was provided with temporary assistance during a period of convalescence from a long illness. Another was able to return to a partial practice and to become self-supporting.

The Benevolence Fund started calendar year 1952 with cash of \$15,644 and U. S. Treasury bonds of \$27,000 par value. During the year it received \$11,086 from the Association, at the rate of \$1 per active member. Another \$3,665 was received as a contribution from the Woman's Auxiliary to the C.M.A.. \$980 came from interest on securities and \$381 was added to assets through discount on bonds purchased. Total receipts were \$16,112. Benefits paid out totaled \$7,648 and accrued interest on bonds purchased came to \$46, making total expenditures for the year of \$7,694.

As of December 31, 1952, the Benevolence Fund had \$7,061 cash on hand and \$44,000 in securities to its credit, for total resources of \$51,061, or \$8,417 more than at the start of the year.

The chairman wishes to pay tribute to the Los Angeles organization for its constant cooperation and to recognize the prompt and sage counsel of Drs. Elizabeth Mason Hohl and John W. Sherrick, members of the Benevolence Committee. Both members have been constantly alert to the problems confronting the committee and have aided immeasurably in their solution.

Much credit is also due the Woman's Auxiliary to the California Medical Association for its continued support of this program. The Auxiliary chapters have been most diligent in raising funds for benevolent purposes and the members of the Auxiliary, individually and collectively, are due a large vote of thanks.

Attention is also called to the fact that contributions to the Benevolence Fund might well be solicited from people of means who may wish to support this activity through bequests. Surely this is a worthy cause for the consideration of individuals who wish to aid those less fortunate than themselves.

The chairman has long believed that the contribution of the Association to the Benevolence Fund might well be placed at a higher figure than \$1 per member per year. A greater contribution would make the work of the committee more effective and the attention of the House of Delegates is respectfully directed to the opportunity for added support of this activity.

Respectfully submitted,

AXCEL E. ANDERSON, *Chairman*

COMMITTEE ON POSTGRADUATE ACTIVITIES

To the President and the House of Delegates:

During the year of 1952 your Postgraduate Activities Committee has continued the program already under way since 1950. During the year, Dr. Edward C. Rosenow, Jr., of Pasadena has acted as chairman of the committee, assisted by Dr. Herbert W. Jenkins of Sacramento, Dr. Lester S. Gale of Bakersfield and Dr. Albert C. Daniels ex officio. Dr. C. A. Broadus of Stockton has continued to serve as director of Postgraduate Activities.

During the year, the committee has met eight times in business session to plan the various programs for five regional institutes, twelve county speakers and one ten-lecture circuit series for five northern cities, Ukiah, Eureka, Redding, Chico and Marysville.

The five regional medical and surgical institutes have continued to be very successful and still attract much local interest. During the year, one was held for the southern counties at San Bernardino on January 17 and 18 with a total registration of 136.

North Coast counties met at Santa Rosa, February 14 and 15, registration 136; Sacramento Valley counties at Sacramento, April 3 and 4, registration 199; San Joaquin Valley counties at Fresno, October 2 and 3, registration 213; West Coast counties at Santa Barbara, October 23 and 24, registration 84.

All of our programs have been open without fee to interns and residents. Many military personnel have attended as guests.

Your director has assisted in the conduct of the programs for the Stockton Postgraduate Study Club, the Sunday symposium at Visalia in May, and the two-day convention at Brawley in February.

The speakers for the institutes, the county societies, the circuit postgraduate lectures, and the programs for the several local conferences have been furnished mainly by the faculties of the five medical schools through the cooperation of the representative of the postgraduate teaching department of each school. While we have been able to pay a minimum of \$50 per lecture, plus the speaker's travel expense, we still feel greatly indebted to the teaching departments of Stanford, University of California, College of Medical Evangelists, University of California at Los Angeles and the University of Southern California. They have given us one hundred per cent cooperation.

The California Academy of General Practice is allowing hour for hour credit for attendance at all of our programs to rank as credit for the number two classification of fifty hours in three years. This makes it possible for many men to earn their more difficult requirements without too much loss of time from their practice.

An innovation this year was the conduct of a ten-weeks circuit postgraduate lecture series. Ten leading members of the faculty of Stanford University School of Medicine constituted the teaching staff. Each one made the circuit of Ukiah, Eureka, Redding, Chico and Marysville, spending an evening in each city to conduct a quiz conference for two or three hours along the lines of his specialty. Almost 150 doctors registered and attended the courses. They were well pleased with the program and want it continued as an annual event.

A conference of representatives from the five regional divisions of the state with the Committee on Postgraduate Activities and from each of the medical schools is held annually in Los Angeles to plan the year's program.

Your committee feels that the program initiated is of wide general interest and should be continued. Therefore your committee requests the House of Delegates that the Council of the California Medical Association be directed to continue the allocation of funds for the support of this committee in making possible postgraduate opportunities for its members.

The California Medical Association may well feel proud of its part in fulfilling a real service to its membership by making this high-caliber postgraduate opportunity available to them.

Respectfully submitted,

EDWARD C. ROSENOW, JR., *Chairman*

See financial report below.

FINANCIAL STATEMENT

Stockton Office Expense:			
Salaries:			
Director	\$ 6,000.00		
Secretary	1,925.00		
Rent	600.00		
Telephone	97.55		
Postage	302.11		
Stationery	131.42		
Printing	1,119.47		
Supplies	192.03		
Extra Help	763.85		
	\$11,131.43	\$11,131.43	
Conferences of Committee:			
Travel expense of conference.....		793.13	
Institutes and County Lectures:			
Speakers:			
Honoraria	\$3,300.00		
Expenses	1,453.76		
	\$4,753.76		
Refreshments			
(during Institutes)	211.07		
Hotel	469.51		
Meals	978.98		
Transportation	705.45		
Porter Service	92.25		
	\$7,211.02	\$ 7,211.02	
Circuit Lecture Series.....	5,000.00		
Miscellaneous	216.98		
	\$24,352.56	\$24,352.56	
Receipts from Institutes and Circuit Series.....		7,445.00	
		\$16,907.56	
Budget:			
July 1 through December 31, 1951..	\$ 7,500.00		
Jan. 1 through July 31, 1952.....	9,250.00	\$16,750.00	
N. B.—This report includes the expense of the Circuit Series which was added to the program after the budget was made up.			

COMMITTEE ON MILITARY AFFAIRS AND CIVIL DEFENSE

To the President and the House of Delegates:

The members appointed to this committee are as follows: Frank F. Schade, M.D., Los Angeles (1952); William L. Bender, M.D., San Francisco (1953); Justin J. Stein, M.D., (Chairman), Los Angeles (1954).

MILITARY AFFAIRS, SOUTHERN CALIFORNIA

The Southern California Advisory Committee has acted as an advisory group under Public Law 779 to the Selective Service System in Southern California and to the Armed Forces. The Southern California geographical area includes the following counties: Los Angeles, Kern, Santa Barbara, Ventura, San Bernardino, Orange, Riverside, San Diego, Imperial, and the combined counties of Inyo, Alpine, and Mono. This committee is composed of the following: John C. Ruddock, M.D. (Chairman); Wilton L. Halverson, M.D., Maurice Smith, D.D.S., Carl E. Wicktor, D.V.M., and Helen D. Halvorsen, R.N.

The great majority of special registrants are centered in the large areas of population such as the cities of San Bernardino, Bakersfield, Santa Barbara, San Diego, Los Angeles, etc.

The PRIORITY I group of physicians as classified by the Selective Service System have all been processed. (Please bear in mind that physicians who held reserve commissions prior to the time of registration were not required to register and therefore are not reflected in the following figures.) As of October 31, 1952, there were 554 living Priority I Special Registrants in Southern California. Of these the following is true:

	Total
I-A—Classified as available (12 have been physically examined, found acceptable and are awaiting induction; 45 are professionally available but have not been physically examined; 2 have had temporary postponements of induction).....	59
I-C (Enl.)—Accepted commissions and now on active duty	212
I-C (Ind.)—Actually inducted, now on active duty.....	2
I-C (Dis.)—Discharged from active service.....	1
I-D—Commissioned and awaiting active duty orders.....	89
II-A—Deferred until March 1, 1953, because of essentiality (only 9 are living in Southern California, the remainder being presently employed out of state)....	36
III-A—Hardship classifications.....	4
IV-A—Sole-surviving son	2
IV-F—Found not acceptable for commissioning as medical officers.....	149

The PRIORITY II group totals 91 living registrants, as follows:

Total Classified Special Registrants—86	
I-A—Classified as available (17 have been physically examined, found acceptable and are awaiting induction; 5 are professionally available but have not been physically examined).....	22
I-C (Enl.)—Accepted commissions and now on active duty	11
I-C (Ind.)	0
I-C (Dis.)	0
I-D—Commissioned and awaiting active duty orders.....	17
II-A—Deferred until April 1953, because of essentiality (six are living in Southern California, the remainder being presently employed out of state).....	11
III-A—Hardship classifications	2
IV-A	0
IV-F—Found not acceptable for commissioning as medical officers	23

In the PRIORITY III group, 1,499 physicians are registered in Southern California. As of October 31, 1952, 633 have been classified as follows:

I-A—Classified as available, subject to change. (Only 6 have been physically examined and found acceptable. The remainder have not completed physical examination and the majority have not been reviewed by this committee, to date).....	509
I-C (Enl.)—Accepted commissions and now on active duty	4
I-C (Ind.)	0
I-D—Commissioned and awaiting active duty orders..	1
II-A—Deferred because of essentiality.....	35
III-A—Hardship classifications	3
IV-F—Found not acceptable for commissioning as medical officers	26
V-A—Over age of liability (51 years).....	55
V-A—Total cancelled.....	13
V-A—Total deceased	21

Recent graduates who have had no active military service become special registrants in Priority III upon graduation. We recommend that these men be held in a II-A (deferred) classification until completion of their internships, at which time they automatically revert to a I-A classification. If a recent graduate is under 26 years of age, he also has a liability under the basic draft act. If he has been deferred by reason of internship, student classification, etc., on or after June 19, 1951, this dual liability is extended until he is 35 years of age.

Citizens of Canada, and some other countries which do not have special treaty arrangements, who enter this country as aliens on a visa to accept employment such as a residency and who hold an M.D. degree, must register as special registrants within five days of the time of their entry into this country. Such aliens who have not attained their twenty-sixth birthday must also register as regular registrants within six months from the date of entry. After registration and unless otherwise entitled to a deferment, they will be liable for induction into the armed forces on the same basis as citizens of the United States. (Most of them will fall into Priority III as special registrants.)

If a reserve officer desires to resign his commission, and his resignation is accepted by the armed forces, he must register immediately with Selective Service and take his chances of being inducted under the special registration. (Usually his chances for further deferment are nil.)

The Health Resources Advisory Committee periodically sends lists of medical, dental and veterinarian reservists for our opinion on essentiality in civilian practice or availability for military duty. These names are sent from this office to the local county advisory committees for investigation and report. Recommendations are returned to us for review and transmittal to the Health Resources Advisory Committee, Washington, D.C., thence to the service making the inquiry.

The Korean War started about the first of July 1950, and reserve officers who were activated involuntarily soon afterward have, for the most part, returned to civilian life, having been replaced by special registrants from the Selective Service System under Public Law 779. Many Priority I and II physicians have also completed their obligated duty and have been released from active duty. This committee receives from the Department of Defense the lists of doctors who are presently being released from active duty and these names are forwarded to the local medical societies as potential replacements for communities, hospitals, and areas that are critically in need of medical service. A few of the rural communities in this area continue to hold as essential doctors who should be available under the law. It is hoped that these men can be released when the local medical societies can find replacements.

Public Law 799 is due to expire June 30, 1953. It is an amendment to the basic Selective Service Law and concerns physicians, dentists, veterinarians and all other allied professions. Up to the present time only physicians, dentists and veterinarians have been affected. During the period of operation since August 1950, many inequities have been noted in the law and its operation. The law will undoubtedly be extended by action of the new Congress, and certain inequities are now being brought before the Department of Defense and the Selective Service administrators concerning age limits, credit for previous military service, hardships, commissions applied for and given, and various other discrepancies. By July 1953, Priority I and Priority II will no longer be a problem and could be deleted from the law. The law then could be simplified and concern only two groups—those who have had service and those who have not.

The Southern California Advisory Committee to Selective Service and the armed forces continues to operate with the same personnel that was originally appointed. The appoint-

ments were made by the National Advisory Committee upon the recommendation of the California Medical Association. Our work has been made pleasant by the wholehearted support that has been given us by the medical associations in the area within our jurisdiction.

This Medical Advisory Committee is unique because in the mechanics which have been set up for it, the medical profession in itself has a voice in determining whether or not a man is essential to the health, welfare and interest of the community in which he practices. This committee does not procure doctors for the service, but it is the only specific agency of government that can officially request deferment under the law. The committee decides only on one factor, namely, essentiality. All other factors such as hardship, dependency, citizenship, physical acceptance, etc., are the sole prerogative of the Selective Service System on standards set up by the Sixth Army (in this state).

Following is the current policy of schedule for release from active duty, as announced by the Department of the Army:

Priority I, II, or III Reserve Medical, Dental and Veterinarian Corps officers serving involuntarily on active duty will be released upon the completion of twenty-four (24) months' service in their current tours of duty, except that those who had one year or more of active duty between 7 December 1941 and 2 September 1945, exclusive of the time spent in ASTP or V-12 (or internships) must be released before the completion of seventeen (17) months' service unless they volunteer to serve a total of twenty-four (24) months or longer. A further exception is that those officers who are returned from overseas with less than ninety (90) days remaining to serve in their current tour of duty will be separated at the time of arrival in the continental United States, regardless of their priority. It is emphasized that this policy applies only to those officers who were involuntarily called to active duty and remain in their involuntary status—i.e., have not voluntarily extended for any period.

Submitted by JOHN C. RUDDOCK, M.D., *Chairman*

MILITARY AFFAIRS, NORTHERN CALIFORNIA

This committee has been requested by the Health Resources Advisory Committee to the office of Defense Mobilization to take an active part in relocating medical, dental and veterinary reserve officers in civilian practice after completion of their period of active duty. Such reservists will be returning in considerable numbers.

The Northern California Advisory Committee undertakes this function with enthusiasm not only in the interest of returning veterans but also of communities and institutions which face a lack of adequate professional manpower because of military demands. We hope to make this office the point of contact between veterans who want to practice in Northern California, and communities and institutions which need their services.

A copy of a letter sent to all returning veterans is herewith enclosed:

NORTHERN CALIFORNIA ADVISORY COMMITTEE
450 Sutter Street, Room 2009, San Francisco 8
Telephone: DOuglas 2-5280

We have received word that your tour of active duty has been, or is about to be completed. Welcome back to civilian life!

Acting as we do to advise the Selective Service System and the Office of Defense Mobilization on the availability of men who are to replace you who leave the service, we are in close touch with vacancies which will occur in civilian practice. Many opportunities for returning veterans already exist in Northern California, and many more will occur. There is an immediate need for house officers, both in urban and rural hospitals as well as in university teaching services, for physicians, dentists and veterinarians in

private practice, general or specialized, in communities ranging in size from small to large, and for public health officers.

It is not only our privilege, but equally our duty, to help you get started again without delay in civilian life, in the interest of communities and hospitals which need your services badly, as well as for your benefit. We are urging such communities and institutions to inform us of such needs. Thus we strive to make this office the means of getting returning veterans into positions you want and which need you.

If you want to take advantage of one of the many opportunities in Northern California, please tell us what type of work and locality you desire, and something of your professional background so that we may help you get located. We are enthusiastic about the possibilities of this service for all concerned, and, in a broad sense, the maintenance of adequate health services for civilians as well as members of the armed forces.

Write us now. We promise action.

Cordially yours,

WILLIAM L. BENDER, *Chairman*

Increasing numbers of returning veterans are indicating their desire to locate in Northern California and are serving as a most important pool of manpower from which to draw replacements for those whose turn it comes to enter active military service. There is evidence already of decreasing shortages of civilian professional personnel. The process of screening Priority III dentists for availability for active duty is about finished and that of physicians is well under way.

The Doctor Draft Law, Number 799, 81st Congress, will expire July 1, 1953. There is much controversy relative to the law, if any, which is to succeed it. By and large it is my considered opinion that the doctor draft is working smoothly and with a minimum of inequity in this area. We have followed the policy from the start, that we of the Advisory Committees are the "friends in court" of the professional men who are required to register under the law. We base our recommendations for or against availability after personal investigations of each case individually by his fellow doctors in the area in which he practices.

Submitted by WILLIAM L. BENDER, *Chairman*

CIVIL DEFENSE

The California Medical Association has been active in civil defense and has at all times demonstrated its readiness to participate in such a program. This association is readily kept abreast of civil defense activities by its representation on the Governor's Citizens' Medical Advisory Committee and by attendance of representatives at the meetings of the California Disaster Council.

During 1952 there was participation in radiological defense, blood bank and blood derivatives, refresher courses, personnel training and organization, etc. One of the main accomplishments during 1952 was in helping plan for adequate medical supplies. The State Civil Defense Organization has purchased more than \$4,000,000 in medical supplies and over 60 per cent are actually on hand in California.

During 1953 it is hoped that all civil defense medical supplies will not only be on hand but will be distributed to all the different regions.

Respectfully submitted,

JUSTIN J. STEIN, *Chairman,*
Committee on Military Affairs
and Civil Defense

COMMITTEE ON PUBLIC RELATIONS

To the President and the House of Delegates:

Following the original directive from the House of Delegates, for the past year the Public Relations Department, on a statewide basis, has (1) assisted in establishing and then publicizing the availability of emergency medical care in

practically every one of the component societies, has (2) encouraged the making of that care available without regard of ability to pay and has (3) been instrumental in activating and then publicizing the existence of Public Service committees within the various component societies where misunderstandings between physician and patient can be corrected.

That the effects of this program are reaching the public is best attested to by what *others say about us*—not what we claim for ourselves. A letter from Mr. John B. Long, general manager of the California Newspaper Publishers Association, states:

My dear Ed:

Seeing one of your advertisements giving an emergency telephone number to call to get a doctor quickly in the west San Gabriel Valley just reminded me to write and tell you of the excellent reaction I have been receiving from publishers around the state to your program of grass roots public relations.

It is encouraging to note that, to our knowledge, in no county where our program has been activated, has there been a single unfavorable news story on the lack of medical care in case of an emergency.

This record of accomplishment bespeaks the cooperation of the members of the profession.

The actual work of the department should need no itemization in this brief report as it is best known to the officers and members of the individual county societies where we have been privileged to serve.

We do, however, wish to call the profession's attention to the excellent cooperation displayed by the press, radio and TV from one end of the state to the other.

Routinely, the department—on call—has served county societies in all manner of local problems and projects. We stress again that we are "at your service."

Concluding on a personal note the undersigned would like to commend the loyalty, initiative and intelligent understanding of the objectives of the profession by Glenn W. Gillette, San Francisco, and Jerry Pettis, Los Angeles. These two associate directors are responsible for much of the success of the public relations program during the times when the undersigned is attending the lengthy sessions of the California Legislature.

With the permission of the President and the members of the House of Delegates we would like to present a detailed report during the 1953 meeting of the Association.

Respectfully submitted,

ED CLANCY, *Director*

COMMITTEE ON SCIENTIFIC WORK

To the President and the House of Delegates:

The Committee on Scientific Work as usual held two meetings during the past year and met with the section officers each time.

After obtaining permission from the Council the annual session was lengthened one day so that the House of Delegates could meet on Sunday, May 24, without interference with the Scientific Session. The House of Delegates will meet again on the 27th, during which time no scientific programs are planned, but social or other recreational activities will be carried out.

This year the President's guest will address an evening meeting open to the public instead of the usual general meeting of the Association.

The committee on local arrangements was most valuable during the recent sessions and it is again active this year. With the one free day available between scientific sessions the Committee on Scientific Work felt that ancillary organizations could use this time for meetings without interference with the Annual Session.

The usual press coverage will be carried out under the direction of Mr. Robert Edwards who has done such an outstanding piece of work each year. A "Meet the Press" luncheon will be held on Saturday, May 23, at which time any and all newspaper men are given an opportunity to review all papers, and summaries of papers.

As in previous years, the section executives have been most important in seeing that the meetings run smoothly. They are ably assisted by Mr. Robert L. Thomas, who has done most excellent work in arranging the mechanics of the meetings. Again Mrs. Barbara Rooney has provided the invaluable help of organizing the program and steering the various sections through the difficulties arising with the Annual Session.

Respectfully submitted,

ALBERT C. DANIELS, *Chairman*

ANNUAL REPORT OF THE CANCER COMMISSION

To the President and the House of Delegates:

The most important development in the program of the Cancer Commission during the past year has been a distinct acceleration of the Commission's interest in proposed treatments for cancer. While the Commission has always maintained a continuing interest in this subject, the first intensive investigation of a proposed form of treatment for cancer was carried on during the year 1951 to 1952 under the chairmanship of Robert A. Scarborough. The agent under survey at that time was the enzymatic substance designated as arginase, and the principal phase of the Commission's investigation of this proposed treatment of cancer was in the nature of a review of patients who had been treated with arginase. No satisfactory evidence of effectiveness could be demonstrated for this drug, and at the time of the 1952 annual meeting of the California Medical Association, a series of newspaper articles describing this investigation and emphasizing the failure of arginase to accomplish any objective benefit in cancer was picked up widely throughout the state.

During the ensuing months of 1952, claims which were and are being made for several unrecognized forms of treatment became an issue of increasing importance. The officers of the Commission were consulted by a number of press services and national magazines during the summer and fall of 1952 concerning efforts being made to obtain publicity for an agent referred to as Laetrile, sponsored by the Krebs group of San Francisco operating as the John Beard Foundation. Since September 1952 a thorough investigation of Laetrile has been done from laboratory, experimental and clinical angles, resulting in the preparation of a report for submission to the Council, demonstrating again the lack of any evidence of effectiveness of this widely touted agent.

The increased interest and discussion of this and other alleged treatments for cancer has, as you know, commanded the interest of the Council. The Cancer Commission is deeply grateful for the interest and support offered by the President and the Council, as a result of which the Commission is undertaking still further expansion of this phase of its activities.

Early in January a joint statement by the President and the writer concerning the intent of the California Medical Association and its Cancer Commission vigorously to pursue such investigations in the interest of the people of California was released to the press. This announcement secured widespread publicity and very favorable comment. Several weeks later the Secretary of the Commission sent to editors of all California newspapers, for their information, a state-

ment from the Cancer Commission concerning our intent to pursue objective and honest studies of proposed treatments for cancer, and emphasizing our belief that such announcements as will be made concerning specific forms of proposed treatment should be of interest not only to the medical profession, but to the public as well.

The report on the Commission's investigation of laetrile, referred to above, is scheduled for early publication in *CALIFORNIA MEDICINE*, as well as for release to the press in a synoptic form.

Other forms of alleged treatment for cancer enjoying some degree of popularity in California are scheduled for an investigation during the coming year. In this connection the Commission has designed a format which will be followed in all such investigations.

Other continuing activities of the Cancer Commission during the past year may be summarized as follows:

1. In the 1952 calendar year 21 county medical societies were provided with Cancer Conferences. A Conference was provided for the Fourth District Dental Society of Los Angeles. Total attendance at all conferences was 1,440, of a membership of 4,188 (34.4 per cent). The total cost of all conferences was \$2,000 to the Cancer Commission and \$777.92 to the California Division of the American Cancer Society. Twenty-four county medical societies will be offered Cancer Conferences in 1953.

2. Sixty Consultative Tumor Boards were given Cancer Commission approval. Inspection of these Boards indicated that they were operating in accordance with the minimum standard requirements of the Commission. It is increasingly apparent that the services of these Boards are being sought by physicians. Eight new Boards have organized recently.

3. The Mid-Winter Conference on Tumor Pathology was held under the auspices of the Cancer Commission at the Fairmont Hotel in December as a joint session with the Southwestern Region of the College of American Pathologists and the California Society of Pathologists. Henry D. Moon, M.D., was chairman, James F. Rinehart, M.D., was moderator and the program chairman was George J. Hummer, M.D. The customary large attendance of pathologists characterized this session.

4. The annual Pre-Convention Tumor Pathology and Radiology Conference will be held in May, 1953.

5. As announced in the Commission's report for last year, the Cancer Commission now has under its auspices the Tumor Tissue Registry located at the Los Angeles County Hospital, as a state-wide activity. The financial support of this project is now being provided jointly by the California Medical Association and the California Division of the American Cancer Society. In addition to the consulting group of pathologists at this central Tumor Tissue Registry, there is a corresponding group of pathologists for the San Francisco-Oakland area. Both consulting groups review monthly problems in histopathology submitted by pathologists of the state as well as some material from adjoining states. Currently James A. Kahler, M.D., is chairman of the Tumor Tissue Registry. In addition to consulting service, the Registry is rapidly accumulating a large volume of representative cases now constituting a study collection of microscopic sections, with clinical information and roentgenographic and laboratory data. This collection will perform a service of constantly increasing value to pathologists, and indirectly to physicians generally as well as to the cancer patient in the years to come.

6. The Commission and the California Division of the American Cancer Society continues to provide men in general practice throughout the state with subscriptions to *CA: A Bulletin of Cancer Progress*. Last year nearly 5,000

subscriptions were so provided and the Division supplied over 15,000 copies of the seventh in a series of monographs on cancer, dealing with malignant lymphomas and leukemias.

7. Cooperative effort with the American Cancer Society continues to provide showings of professional films on cancer to medical groups. Outstanding items are films dealing with the problem of early diagnosis in breast cancer, gastrointestinal cancer, uterine cancer and a new film which is available on exfoliative cytology in the diagnosis of gastric cancer.

8. The film on "Breast Self-Examination" has had increased showings to lay audiences during the past year and by actual count 91,701 women have viewed this film.

9. Programs of individual counties in determining the effectiveness of cancer detection in the physician's office are underway, particularly a project conducted by the Riverside County Society, now in its eighth month of operation. The first few months of this project were more or less exploratory, but beginning in September 1952 the program gained momentum, not only in the number of physicians participating and reporting, but also in an increased number of patients seeking cancer detection examinations.

John S. O'Toole, M.D., chairman of the Cancer Committee for the Riverside County Medical Society, reports that the incidence of cancer discovery is higher than that reported by previous similar surveys. The significance of this finding will not be apparent until the plan has been in operation for a longer time, but at present the above observations seem to be valid.

10. The Commission has continued to foster and extend programs of cancer detection as developed on the initiative of individual county medical societies. Correspondence and some considerable personal contact with cancer committees of county medical societies and secretaries of county societies has resulted in a number of satisfactory programs having been instituted during the year. The Commission encourages the polling of the membership of a county medical society to determine those physicians who are interested in and willing to undertake adequate cancer detection procedures. Where approval of the county medical society is forthcoming, the Commission believes that the roster of physicians so set up may properly be available to the county branch of the American Cancer Society and its information center for orderly release of names to those who seek cancer detection procedures. In some instances, of course, the county society prefers to reserve this prerogative for itself. A brief outline on cancer detection, amounting to a statement by the Commission as to methods and potential value of cancer detection, has been prepared and will be released in the immediate future. The Commission recognizes the continuing demand by a part of the population for cancer detection procedures, and the necessity for provision of such service as a part of general health surveys by individual physicians. The Commission sees no reason to consider any change in its established policy that such screening procedures are best done by interested physicians in their offices rather than in Cancer Detection Centers.

The Commission again acknowledges with sincere appreciation the great assistance, financial and otherwise, rendered by the California Division of the American Cancer Society. The Commission also acknowledges the cooperative and helpful liaison which exists with the Bureau of Chronic Diseases of the State Department of Public Health. Dr. Franklyn C. Hill, medical director of the Cancer Commission, continues to render conscientious and highly efficient services.

Respectfully submitted,

IAN MACDONALD, *Chairman*

EDITORIAL BOARD

To the President and the House of Delegates:

With the approval of the Council two members were added to the Editorial Board in 1952—Dr. James E. Reeves of San Diego and Dr. John G. Walsh of Sacramento. Themselves in general practice, they are to review and advise upon manuscripts and other editorial matters having to do with the general practice of medicine. Neither the Editorial Board nor the Executive Committee of the Board met as a unit during the year. The members of the board are:

Chairman of the Board:

Dwight L. Wilbur, San Francisco

Executive Committee:

Albert J. Scholl, Los Angeles
H. J. Templeton, Oakland
Edgar Wayburn, San Francisco
Dwight L. Wilbur, San Francisco

Allergy:

Frank J. Crandall, Jr., Los Angeles
Samuel H. Hurwitz, San Francisco

Anesthesiology:

William B. Neff, Redwood City
Charles F. McCuskey, Los Angeles

Dermatology and Syphilology:

Paul Foster, Los Angeles
H. J. Templeton, Oakland

Ear, Nose and Throat:

Lawrence K. Gundrum, Los Angeles
Lewis Morrison, San Francisco

Eye:

Frederick C. Cordes, San Francisco
A. R. Robbins, Los Angeles

General Medicine:

Maurice Sokolow, San Francisco
O. C. Railsback, Woodland
Edgar Wayburn, San Francisco
John Martin Askey, Los Angeles
W. E. Macpherson, Los Angeles

General Practice:

James E. Reeves, San Diego
John G. Walsh, Sacramento

General Surgery:

Frederick L. Reichert, San Francisco
C. J. Baumgartner, Beverly Hills

Orthopedic Surgery:

Frederick C. Bost, San Francisco
Hugh Jones, Los Angeles

Thoracic Surgery:

John C. Jones, Los Angeles
H. Brodie Stephens, San Francisco

Industrial Medicine and Surgery:

Rutherford T. Johnstone, Los Angeles
John E. Kirkpatrick, San Francisco

Plastic Surgery:

George W. Pierce, San Francisco
William S. Kiskadden, Los Angeles

Obstetrics and Gynecology:

Daniel G. Morton, Los Angeles
Donald G. Tollefson, Los Angeles

Pediatrics:

E. Earl Moody, Los Angeles
William G. Deamer, San Francisco

Pathology and Bacteriology:

Alvin G. Foord, Pasadena
Alvin J. Cox, San Francisco

Psychiatry and Neurology:

Karl M. Bowman, San Francisco
John B. Doyle, Los Angeles

Radiology:

R. R. Newell, San Francisco
John W. Crossan, Los Angeles

Urology:

Lyle Craig, Pasadena
Albert J. Scholl, Los Angeles

Pharmacology:

Hamilton H. Anderson, San Francisco
Clinton H. Thienes, Los Angeles

Public Health:

George Uhl, Los Angeles
Charles E. Smith, San Francisco

Respectfully submitted,

DWIGHT L. WILBUR, M.D., *Chairman*

ADVISORY PLANNING COMMITTEE

To the President and the House of Delegates:

The Advisory Planning Committee has met regularly during the past year, holding its meetings on the day before each meeting of the C.M.A. Council. Its recommendations to the Council have been reported as a part of the Council minutes.

During the past year the committee has gained two new members and lost two former members. Mr. Boyd Thompson, executive secretary of the San Joaquin County Medical Society, and Mrs. Jane Algeo Watson, executive secretary of the Sacramento Society for Medical Improvement, were appointed members of the committee by the Council. Mr. Frank Kihm of San Francisco County and Mr. Vance Venable of Kern County, both resigned from their positions, have dropped from the committee's membership.

The committee's activities in recent months have been directed almost entirely to matters of public relations. In this connection, it is the chairman's firm conviction that the committee serves an extremely valuable function in acting as a sounding board on such matters. It is obvious that any statewide public relations activity must have the thorough support of the county society executives if it is to succeed. The Advisory Planning Committee acts as a testing ground and, at the same time, as a critical board on all public relations proposals. In these capacities alone, if for no other reasons, the committee's existence appears to be a sound function for the Association.

Respectfully submitted,

JOHN HUNTON, *Chairman*

C. M. A. BLOOD BANK COMMISSION

To the President and the House of Delegates:

This report must of necessity be summarized because of space requirements. Each activity or notation listed is backed by voluminous reports kept on file in our central Clearing House office. Copies of the more important phases of work in the last year were sent to the C.M.A. head office, and I have sincerely tried to keep you fully informed on all blood bank matters by reporting them before the Council meetings.

During the year we lost a most valued member of our Blood Bank Commission. With your permission, sirs, I should like to dedicate this report to the memory of Dudley Saeltzer of Sacramento. A great deal of his heart, work, influence, and loyalty are contained in the summarization.

Activities:

1. Blood drawn by our system banks for the armed services since the Korean War through December 1952 totaled 388,019 units.

Blood drawn, processed, and distributed by our system banks for the day by day civilian requirements during 1952 totaled 119,149 units.

Each unit of blood drawn for civilian and military needs was procured, processed, and distributed *at cost*.

2. It has been a year of intensive integration and consolidation within our blood banking system of eleven banks.

3. Expansion of interstate reciprocity and further development looking toward a national non-profit system has occurred. Extreme interest has been shown in our plan of action by numerous state medical societies. Organized medicine throughout the country is taking a more active interest in shouldering its inherent responsibility; it is a good sign for the future.

4. Work continues on a general remodeling of existing blood banks and expansion of the physical plants to meet the population growth requirements within our state.

5. Standardization of administrative and technical procedures progresses apace in order to develop a complete and uniform state blood banking operation.

6. Technical and administrative assistance was offered to other states and a few foreign countries in order to aid them in establishing blood banks in conformity with our non-profit community network.

7. There has been a widespread dissemination of pertinent information to the general public through the media of radio, television and lectures. We logged over 15,000 miles of travel, most of this by air.

8. Honest attempts have been made to improve working relationships between our system banks and the Red Cross. Too many problems still develop and they tend to obscure our common goal. Twelve years of experience only serves to confirm our opinion that in peace and disaster our type of blood bank is the most stable. Our system *has* to function and give service in days of depression, inflation, and during a stable economic era.

9. Research on blood, blood derivatives, and blood banking procedures presents a constant daily challenge, our progress is slow but sure.

10. We had six showings of our new exhibits before scientific meetings, with three of these outside the state.

11. Suggestions and proposals were made to the Office of Defense Mobilization. "We recommend the creation of a national blood committee composed of not just two or three organizations, but all agencies interested in blood banking, namely, the American Medical Association and its related specialty societies, the American National Red Cross, the American Association of Blood Banks, the American Hospital Association, the National Institutes of Health, National Research Council, and appropriate defense agencies. This representative over-all committee should be invested with administrative and operational powers and should be the coordinating committee for a national blood program. This commission should be attached to the Office of Defense Mobilization. Similar committees should function at state and local levels." This is not a new idea; we have presented it several times before but to no avail. At this time of writing there is no impartial national blood bank committee to consider and settle interorganizational problems, to impartially consider suggestions, decisions, and the problems of the large number of independent blood banks actively engaged in the national blood program. Our plan, which is quoted above, would go far to cool rising tempers, to make for less friction, and to bring medicine, through the office of the A.M.A., into this vital blood banking program.

12. Realignment of the present state territorial boundaries for our existing blood banks progresses in order to equalize procurement and distribution pressures and inadequacies.

13. Enlargement of our central clearing house duties continues. During December 114 letters were answered. This constantly growing correspondence is mostly made up of out-of-state queries on blood banking.

14. Our California system continues its active participation in the State of California Civil Defense program. Your committee maintains excellent working arrangements with all Civil Defense committees.

15. A careful study was made of the December proposal by the American National Red Cross to make gamma globulin available to areas threatened with polio epidemics. This is our formulated plan: (1) To cooperate with the Red Cross in the gamma globulin program. (2) Our blood banks do not want to be the distributing agency; there are too many dangerous implications. (3) We will inform all blood

donors presenting themselves to our system banks of our role in the program, stressing the fact that we have nothing to do with the distribution of the gamma globulin. (4) We will ask the editor of the C.M.A. Journal and all editors of local medical society bulletins to publicize the known facts on gamma globulin and polio.

Suggestions for 1953. We ask each member of the C.M.A. to be a blood bank ambassador. We particularly ask each member not to immediately place the blame of a reaction or hepatitis on a blood or plasma transfusion. Such unfortunate incidents can be, and often are, due to other causes. Malpractice suits are costly in time and money. They hurt medicine, and they may hurt you, the doctor. Think of the possible implications before making ill-advised statements to lay people. Make it a point to know your local blood bank. Better still, pay it a visit as a donor and see how smoothly it functions—for you. Our “life line” has grown strong because of your support. Our goal is to improve the service to you and to your patients.

Will all who have helped us please accept my grateful and sincere thanks. Each year the list of our benefactors grows longer; may it continue to grow. The wholehearted support of the President, the Executive Council, and the House of Delegates has made my task almost enjoyable. Words fail to express my admiration for our constantly enlarging blood bank family—it is an honor and a privilege to work with them and for them; this report is in truth a compilation of their accomplishments.

And now—let us see what we can do in 1953!

Respectfully submitted,

JOHN R. UPTON, *Chairman*

COMMITTEE ON INDUSTRIAL HEALTH

To the President and the House of Delegates:

Your committee recommended in its 1952 report the adoption of the following:

“Nursing Services in Industry: A Statement of Principle

“The California Medical Association recognizes the important contribution to industrial health by the members of the nursing profession through the individual activities of the nurses employed by and in industry. Through their contact with individual employees, and with members of management, they have furthered public health education, the use of community resources, improved personal and plant hygiene, healthier psychological relationships between management and workers, and a closer liaison between the plant employee and the practicing physician.

“It is also recognized, however, that demands are made upon nurses in industry by both employees and management to engage in activities which encroach upon the practice of medicine as defined by the Medical Practice Act and which, if acceded to, cause her services to replace rather than supplement the medical care by physicians which is demanded by the welfare of the patient, as well as being mandatory under the law.

“It is urged that the nurse in industry, having met the emergency with which she is confronted, protect herself, her patient and her employer by referring the patient to a physician for diagnosis or medical care when either is required, and that further treatment be carried on only under such medical supervision. Employers of nurses are urged to facilitate such referrals and encourage them, in order that they themselves may be protected against being involved in violations of the Medical Practice Act.

“Technicalities of the Medical Practice Act are difficult to translate into lay language and no simple definition can be given as to what services may be rendered with impunity. It certainly may be said, however, that any injury serious enough to cause temporary disability or which requires more than protective dressing, or does not respond favorably to procedures described in standard texts on first aid, will require medical treatment. It must be borne in mind that, regardless of the desires of the patient or his personal needs, or the demands of the employer in regard to industrial injuries, a nurse is forbidden by law to either diagnose or treat medical conditions or surgical injuries. It is only as this fact is grasped fully by employees and employers alike that the pressure upon the nurse to exceed her area of function will be lessened.

“Every nurse should be aware of the Medical Practice Act and its implications and understand that to ignore the act and its limitations is to invite inevitable violations.

“The California Medical Association anticipates and welcomes the further extension of employment of nurses in industry in view of their tremendous contributions both to the over-all health welfare, and to the physical and emotional comfort of employed individuals. It looks forward to cooperating fully with the California State Nurses’ Association, and the other organized nurses’ groups in establishing and maintaining the area in which the professional industrial nurse may function effectively, efficiently, ethically and legally.”

The Council, in its September meeting, 1952, endorsed the recommendation of the committee. It was the feeling of your committee, however, that before the statement is formally issued it should be presented to the California State Nurses’ Association in order that they might have an opportunity to study it and express their opinions on how the interests of their membership, particularly the industrial nurses, would be affected by this statement. Since their committees have not completed their study a reply has not yet been received. Should it be received before the annual meeting in May, your committee will file a supplemental report.

Should the statement meet with the full approval of the California State Nurses’ Association, we contemplate the possibility of its being issued as a joint statement of the California Medical Association and the California State Nurses’ Association. It is possible that circumstances will be such as to make it advisable to issue it as a statement of the California Medical Association which has met with the approval of the California State Nurses’ Association. It may be that the California State Nurses’ Association may suggest changes in the text which would be quite compatible with the aims of the California Medical Association.

Should study by the California State Nurses’ Association reveal an inability to endorse the statement in its present form, or with minor modifications, it would seem highly desirable that conferences be held with them with a view toward reaching agreement regarding a statement which would be considered mutually advantageous by both the medical profession and the nursing profession.

Your committee is not inclined to believe that any statement unilaterally or jointly issued at the present time will not require future modification, as conditions in the field change or as changes in the laws or the interpretation of the laws applying to medical or nursing practice take place. It may ultimately be that changes in the California situation or changes in the national statement of “Essentials of Medical Services in Industry” will obviate the present feeling of your committee that the situation in California demands a statement referring solely to the California problem.

Your committee has spent several years reaching the recommendations in the above report. The problem is no less intricate from the point of view of the nurses and their organization and we feel that the time required by them to study the situation is not unduly long, nor do we necessarily expect them to have reached an understanding with us at an early date.

We anticipate that the presentation of the "Nursing Services in Industry: A Statement of Principle" will prove to be of service in inviting further joint exploration by the California Medical Association and the California State Nurses' Association and other organized nurses' groups in the continuing problem of the activity of nurses in relation to the Medical Practice Act.

Respectfully submitted,

CHRISTOPHER LEGGO, *Chairman*

COMMITTEE ON RURAL MEDICAL SERVICE

To the President and the House of Delegates:

Considerable expansion in the activities of this committee has been witnessed during 1952-53. Using the A.M.A.'s policies and techniques as a pattern, the committee undertook to broaden its interests in all fields pertaining to health and medical services in rural areas. Problems peculiar to the state of California, of course, received priority in the committee's deliberations and activities.

Shortly after the beginning of the year, the committee embarked upon a program to develop a Rural Health Council within the state. Working with the director of the Agricultural Extension Service, the State Department of Public Health, the California Farm Bureau Federation and the Parent-Teachers Association, groundwork was laid for the formation of a statewide council. This committee with the aforementioned groups, formed the nucleus about which it is planned other organizations will be drawn in at a later date. The Rural Health Council is now an entity and, although it suffered a recent loss of its chairman, namely Dr. J. Earl Coke, through his appointment as Assistant Secretary of Agriculture, we feel fortunate to have had Dr. Coke as chairman of the Council for the past year and are pleased that he has attained greater recognition which he so justly deserves. The purpose of the Council is to serve in an advisory capacity to similar groups in local areas where problems affecting health in a general or specific way may be resolved by the combined efforts of all interested. Thus it is hoped that there will be little need for the myriad of health councils, committees, conferences, etc., wherein there is little or no medical influence which, in the past, has permitted many misrepresentations and misunderstandings.

Besides taking an active part in the formation of the State Health Council, the committee has continued its interests in problems affecting health and medical service in the migrant areas. In the San Joaquin Valley in particular physicians have fulfilled the needs of medical service to the migrants through an arrangement with the medical society, the Health Department and the growers. The migrant worker has benefited greatly from this demonstration and, although physicians will continue to render service where needed, it is to be noted that the migrant worker is becoming less and less migrant, gaining more and more independence and stability and should, in the not too distant future, become self-reliant and assume his responsibility as do all other citizens. We are pleased to report that our experiences in California have been of assistance to those in Michigan faced with a similar problem.

Committee members have been active in other state and local problems and at the present time are undertaking a

study to determine the need for better physician distribution in California. No factual information is available to support or deny the oft repeated charge that there is a lack of adequate physician coverage in many rural areas. Our committee is attempting to obtain the facts concerning this and will report at a later date.

Working with the State Department of Public Health and representatives from various boards of supervisors, the committee is attempting to assist in the solution of the present problem of providing adequate health facilities for certain "playground" areas. Public Health personnel are sorely disturbed at the lack of facilities in many of these areas and it is our sincere desire to be of assistance in this connection. The committee has had several meetings throughout the year with representatives of various groups and benefited particularly by the visit of Mr. Aubrey Gates, field representative for the Council on Rural Health of the A.M.A.

The chairman addressed the California Farm Bureau Federation at its meeting in November and has accepted an appointment by the Governor to his Advisory Committee on Youth and Children.

Future plans include a continuation and an extension of the activities of the State Rural Health Council as well as an activation of Rural Health Committees within the structure of each local medical society. We of the committee feel that health is everybody's business including the physician's and that all matters pertaining to health within the community should have physician representation.

The committee is extremely grateful to members of the administrative staff and the Public Relations Department whose assistance has made the work easier and more pleasant. Without their splendid cooperation and assistance progress would have been extremely slow if at all possible. To other C.M.A. committees and officers with whom the work of this committee has been so intimately entwined we wish to express our sincere thanks.

The Eighth National Health Conference of the A.M.A. to be held in Roanoke, Va., in February will be covered by representation from this committee.

Respectfully submitted,

H. A. RANDEL, *Chairman*

MEDICAL SERVICES COMMISSION

To the President and the House of Delegates:

The Medical Services Commission has held meetings with representatives of the insurance industry and California Physicians' Service since our report to this House of Delegates at the Interim Session, December 1952. The Executive Committee has held two meetings also.

In December 1952 the House of Delegates passed a resolution calling for the commission to undertake a study of all possible legislation that might define and guarantee high standards of medical service in all prepaid plans. We have all phases of this resolution under consideration at this time.

The Council has placed the commission on notice that it will be responsible for any continuation of the work done by the C.M.A.-C.P.S. Study Committee and the C.P.S. Fee Schedule Committee.

The Medical Services Commission is continuing with its efforts to formulate a set of principles under which prepaid medical care plans should be presented to the public.

The commission is proceeding with the collection and codification of data on all types of prepaid medical care.

Respectfully submitted,

LESLIE B. MAGOON, *Chairman*

C. M. A.-C. P. S. LIAISON COMMITTEE

To the President and the House of Delegates:

No meetings of this committee have been held during the past year since no items of business have been referred to it.

Following the thoroughgoing study of C.P.S. relationships by the special committee under the chairmanship of Dr. Wilbur Bailey, its comprehensive report of that study to the House of Delegates, and the action of the House of Delegates upon that report, the original objectives of the C.M.A.-C.P.S. Liaison Committee have been met since the House of Delegates of the C.M.A. has now become the House of Delegates of C.P.S. In addition, the new Medical Services Commission appointed by order of the House of Delegates will make extensive studies into all phases of the prepayment of the costs of illness.

Therefore, it is recommended that the C.M.A.-C.P.S. Liaison Committee be dissolved.

Respectfully submitted,

L. A. ALESEN, *Chairman*

C. P. S. STUDY COMMITTEE

To the President and the House of Delegates:

The committee of fifteen, after devoting many doctor-hours to the project, made a report to the Interim Session, which has already been published.

Respectfully submitted,

WILBUR BAILEY, *Chairman*

C. P. S. FEE SCHEDULE COMMITTEE

To the President and the House of Delegates:

This committee has held no meetings and conducted no business during the year. Its report of December 1951 was not accepted. In November of 1952 the Council ordered that the work of this committee be integrated with the Medical Services Commission. This committee is, therefore, awaiting direction from the Medical Services Commission.

Respectfully submitted,

DEWITT K. BURNHAM, *Chairman*

ANNUAL COUNTY MEDICAL SOCIETY REPORTS

FIRST DISTRICT

San Diego County.

Francis E. West, San Diego, *Councilor.*

San Diego County Medical Society

The year 1952 was one in which many new activities were undertaken by members of the society. It was a year which saw the formation of a record-breaking number of committees, each of which was interested in solving the immediate problems by action!

Numerous projects were successfully completed as a result of the increased interest shown by members in affairs of the community. Foremost among these accomplishments was the work performed by committees which were established to meet with the central labor council, press and radio, and chamber of commerce.

The accomplishments of each committee have insured a better understanding of the problems facing the groups involved.

The society took cognizance of the rapid growth of all communities in the county and found the necessary steps to keep the emergency call system abreast of the tremendous influx of population occurring in this area. All physicians were reclassified as to specialty and as to their desire and ability to take emergency calls. The results of the classification survey have enabled the society-operated call system to maintain the standards which were established in 1933 and which have been met ever since. Here again was an example of the profession recognizing its duty to the public and the committee working fast to accomplish the objective.

The society library continues to improve its facilities and the service it offers to members. Physical improvements were made in an effort to give the library an attractive appearance and a professional atmosphere. A steady increase in utilization is the reward.

Outstanding speakers from all parts of the nation were guests at the monthly dinner meetings. The good attendance record attests to the success of the programs. A new plan for calling doctors during the evening has met the approval of all in attendance.

The medical society took great pride in its display at the county fair at Del Mar—the "Mechanical Quackery" exhibit of the A.M.A. An all-time high was reached in the number of persons who attended the fair. Many favorable comments and letters were received from business organizations and the public on the fine service the society rendered by displaying quack devices that had been used by charlatans to defraud the public.

Another "first" for San Diego was the joint dinner meeting of the Woman's Auxiliary and the medical society. The hilarious skit presented by the ladies played no small part in the success of the first joint meeting.

The Doctors' Service Bureau has continued to grow and improve its many services. Another society-operated project, the San Diego Blood Bank, is a successful community establishment.

The Building Committee, charged with the responsibility of formulating plans for a society building, has made progress. The year 1953 will see definite plans developed and openly discussed.

Our members were proud to host the maxillofacial surgeons for their annual convention in October in Coronado. The southern California chapter of the American College of Surgeons also convened in Coronado. Many of our members attended both conventions.

W. H. GEISTWEIT, JR., *Secretary*

SECOND DISTRICT

Imperial, Inyo, Mono, Orange, Riverside and San Bernardino Counties.

Omer W. Wheeler, Riverside, *Councilor.*

Imperial County Medical Society

Early in the past year an emergency medical care service on a 24-hour basis was established for the residents of Imperial County by the county medical society maintaining a roster at the hospital office with a physician assigned to this service each day. This was advertised in all the local newspapers and the cost for said publicity was taken care of by the public relations department of the California Medical Association.

The constitution of the medical society was amended to provide for a nominating committee to select an official ballot of candidates for the annual election of officers rather than the previous method of nomination of candidates at the time of the election without any previous forethought.

The society holds its regular meetings the second Tuesday of each month at 8 p.m. at the Pioneers Memorial Hospital. The scientific program is followed by a business meeting.

ERNEST BROCK, *Secretary*

Inyo-Mono County Medical Society

The Inyo-Mono County Medical Society has had very successful meetings the past year. We have had Dr. John W. Green, president of the C.M.A.; Dr. Omer W. Wheeler, councilor from Riverside; Dr. Arthur E. Varden, councilor from San Bernardino, and Ben Read from Los Angeles County speak at our meetings.

We have had various medical films shown, sent to us from pharmaceutical houses, and we enjoyed them very much.

Dr. Hill arranged our cancer program, and showed a film on the early diagnosis of cancer. Dr. Dowd gave a talk on "Early Detection of Cancer" which was enjoyed by the entire society and their guests.

We felt we were very instrumental in assisting the election of the President of the United States. We sent out more than 200 letters to our patients and the other doctors did the same. The result was a heavy landslide of Republican votes. The society paid for a half page ad in the local paper. The doctors all signed the ad and paid \$114 for it and they were all glad to do it.

Dr. Green advised us to write to our senators and representatives. We did and had replies from them saying they would pay particular attention to the bills when they came up.

J. CARL CUMMINGS, *President*

Orange County Medical Association

The society's program of effective committee organization, coordination of projects and emphasis on internal relations, as well as public relations, has continued to be our basic objective in 1952.

The Program Committee has been most successful in obtaining outstanding medical lecturers and professors from schools of medicine to appear as guest speakers at the monthly society meetings. These meetings have continued to draw excellent attendance and the interest in the speakers and their subjects has shown a steady increase as a direct result of the excellent work of the committee.

Perhaps the most active committee was our Public Service Committee, which was established in 1950 for the purpose of hearing complaints from the public in an effort to establish better doctor-patient relations where misunderstanding existed. The committee reviewed and adjudicated fifteen cases.

The Public Relations Committee again ably carried out its assignment of publicizing medical society policy regarding the availability of medical care for persons unable to pay for it and also the policy of providing medical care 24 hours a day seven days a week.

The association's Civil Defense Committee continued to lead the way for other comparable groups throughout Orange County. Our geographical location on the fringe of the "critical target area" has caused this committee to be very active.

The Woman's Auxiliary continued active in many fields of aid to the profession and service to the public. Recruitment of student nurses, aid to nurses at the county hospital and allotment of scholarship funds to nurses for both undergraduate and postgraduate work—these were some of the Auxiliary's constructive activities. Through closer correlation of the Auxiliary and society's activities, even more material gains are anticipated during the coming months.

Mr. William Tobitt, executive secretary of our society for the past two and one-half years, tendered his resignation, effective January 1, 1952, to pursue his life-long desire of script writing for radio and television. Numerous applicants were interviewed for the vacated position, and Mr. Everett Bannister of Santa Ana was selected. Mr. Bannister's broad experience with public work will serve him well in his new position.

The medical society and the citizens of Orange County held their official opening ceremonies for the new 75-bed Hoag Memorial Hospital, located on the bluffs of Newport Harbor. The hospital, built entirely from private funds donated by the citizens of Orange County, plus a \$500,000 grant from the Hoag Foundation, received its first patient on September 6, 1952.

Our membership has continued with a steady growth, keeping in step with the gradually increased general population. Our roster at the year's end encompassed 224 active members, plus 17 applicants due for processing early in 1953.

CHAD M. HARWOOD, *Secretary*

Riverside County Medical Association

The annual doctors' and wives' banquet of the Riverside County Medical Association will be held January 21, 1953, at the Victoria Club in Riverside. A golf tournament will precede the dinner dance.

The association meets the second Monday of each month at the Mission Inn in Riverside. A scientific program is presented after a short business session.

The R.C.M.A. Bulletin is published monthly and contains pertinent news and information for the medical profession.

RICHARD N. BOYLAN, *Secretary*

San Bernardino County Medical Society

Our membership has now settled down to a regular figure and we feel that our county is well supplied with physicians representing all phases of the practice of medicine and surgery.

The affairs of our society are in a healthy condition and our officers take an active interest in the management and conduct of our affairs.

Committees have been appointed to take care of many different special duties and without exception these committees are functioning and doing a good job.

We reported the condition of our blood bank last year. This blood bank has operated as a community enterprise and is sponsored by the San Bernardino County and Riverside County medical societies. The public has a high regard for the bank and it is already accepted as one of the essential parts of our community life.

CARL M. HADLEY, *Secretary-Treasurer*

THIRD AND FOURTH DISTRICTS

Los Angeles County.

H. Clifford Loos, Los Angeles, *Councilor*, Third District; J. Philip Sampson, Santa Monica, *Councilor*, Fourth District.

Los Angeles County Medical Association

Two important statistical changes figure prominently in progressive reforms made in Los Angeles County Medical Association administrative policies during the past year: First, that the membership has increased by nearly one-sixth since 1951 and, second, that the subsidiary branches in the outlying districts now compose 58 per cent of the active membership.

In hiring the management consultant firm of Booz, Allen and Hamilton to survey its operations, the association discovered that its growth into the largest organization of its kind in the country demanded numerous revisions in its former business and administrative policies. The recommended changes are now almost completed and should result in a savings of many thousands of dollars during the course of a fiscal year.

The large-scale public relations program approved by the Council last year has become a forceful and effective entity in association affairs during 1952: (1) A better integration of fee complaint and professional conduct matters to the end that both the physician and the public will be more quickly and satisfactorily served; (2) a newly-formed Medical Economics Committee to screen and study financial matters affecting the membership and, in particular, to set up uniform standards for collection agencies serving members of the association; (3) a concentrated radio schedule, under the supervision of the executive secretary, to bring the profession's good deeds before the public eye.

To remedy any real or fancied wrongs being dealt local general practitioners, an association-sponsored committee—representing hospitals, GP's, and specialists—has been set up to study the problem and has made heartening progress since its inception. As in the past, the association's Smog Committee and Civil Defense Committee continued to study methods to better serve the public.

The advisability of the association's embarking on a \$700,000 building program still is in abeyance, though everything short of actual construction has already been completed. It is possible that the final decision will be left up to an individual vote of the entire membership.

PAUL D. FOSTER, *Secretary-Treasurer*

FIFTH DISTRICT

San Luis Obispo, Santa Barbara and Ventura Counties.
A. A. Morrison, Ventura, *Councilor*.

San Luis Obispo County Medical Society

The following information is a synopsis of the activities of our society for 1952:

The San Luis Obispo County Medical Society held ten meetings during the year 1952, two were social and eight were a combination of scientific and business meetings. Meetings were well attended and the scientific discussions by guest speakers were received with enthusiasm.

The San Luis Obispo County Medical Society has continued to be an active backer of the Tri-County Blood Bank.

The society began sponsoring a malpractice, health and accident insurance program for its members and it has been subscribed to heavily.

Ten applicants were elected to membership in the society during the year. Total active membership now is 57, and our society will have two delegates at the C.M.A. convention.

Dr. Jim Scow was elected president for the year 1953.

JOHN H. WOODBRIDGE, *Secretary-Treasurer*

Santa Barbara County Medical Society

At the close of 1952 our society members total 168; 148 active, 3 associate, 2 doing postgraduate work, 2 in military service, 5 sick, 2 life members, 5 retired, 2 transfers, 9 new members, and 8 applicants to be voted into the society at the January meeting. The year was spent with Dr. G. Horace Coshaw as one of our most active and energetic presidents.

The activities of our group are mostly carried on by 20 different committees, the majority of them being active.

The Program Committee has functioned well, having had eminent speakers covering a fairly broad field of professional endeavors.

The Blood Bank Committee reports that the bank is solvent financially and that they have met all requests for the tri-counties (Ventura, Santa Barbara and San Luis Obispo) and the armed forces. Larger quarters are now necessary and plans are under way for a new building; construction will most likely be started within the next few months. The property has already been purchased.

The Diabetic Committee, in conjunction with the Public Health Department, conducted a very successful "Diabetic Detection" week, testing about 300 people, 23 per cent of whom required further study. They were, therefore, referred to their own physicians.

Activity of the Public Relations Committee was principally in publicity, realizing the urgency of keeping the public informed and protected.

Our Disaster Relief Committee has two mobile support units organized and awaiting supplies and the hospitals are ready in case of need for expansion. Further plans are being formulated for Santa Maria and a public health team is in the process of being formed.

All problems presented to the Medico-Legal Committee were relatively small in nature and a satisfactory disposition was made of them.

A two-day postgraduate seminar was held in October. There were two meetings open to the public, one in Santa Barbara and the other in Ventura, the same topics being covered at both gatherings. They were: Public Enemy No. 1, Heart Disease; Public Enemy No. 2, Cancer; Public Enemy No. 3, Socialized Medicine. Between the two towns more than 1,000 people were reached. All facilities of the two communities were used—radio, newspapers and the various organizations—in order to reach the public.

We have been able to work with the Santa Barbara Junior College in getting two important courses of study included in their curriculum beginning in the fall of 1953: (1) A two-year program for medical assistants; (2) a 12-month vocational nurses' course.

Our Liaison Auxiliary Committee reports that the Woman's Auxiliary has not only been active and enthusiastic but also has given tactful cooperation throughout the year.

Other committees functioning are: Entertainment, Alcoholism, Public Health, California Physicians' Service, Public Health League, and Military. We have just recently appointed a committee to investigate thoroughly the various plans used elsewhere for handling the emergency and night calls problem and make recommendations for our society. Also a representative was selected to be on the Council for Social Agencies.

Our library is an important and well organized unit and a hitherto unmentioned phase of our society's work, as far as the pre-convention reports are concerned. In January 1942, Mrs. Emma Woods, of Carpinteria, presented the medical society with a gift of money for the purpose of founding a medical library. A committee of trustees was appointed by the president to administer the library fund and to supervise construction of library space, to purchase suitable texts and current medical journals. The question of space for the new library was solved by the offer of the Cottage Hospital of several rooms on the ground floor of the hospital, rent free and with utilities and janitor service provided. The nurses' library is housed in the same space. The office of the society is contained in one of the rooms.

During the ten years since it was established, the library has endeavored to provide its patrons with the most useful periodicals and books. Borrowing privileges are extended to members of Santa Barbara County Medical Society, members of the California Medical Association living in the state but outside of Santa Barbara, physicians who are not members of the S.B.C.M.S. but reside in the county, doctors of philosophy, and members of the sciences.

The library hours are 9:00 a.m. to 4:00 p.m. and 6:00 p.m. to 9:00 p.m., Monday through Friday. Red Cross staff aides assist during the afternoons. During the 1952 period attendance was: Patrons 9,396, visitors 543. Circulation: Books 2,914, periodicals 1,869. Interlibrary loans 489, and new books 102.

The new year holds promise of being both challenging and busy with our new president, Walter C. Graham, and our new president-elect, L. E. Heiges, Jr., also our new secretary, Arthur E. Wentz, and our same treasurer, Francis B. Zener.

ARTHUR E. WENTZ, *Secretary*

Ventura County Medical Society

Regular monthly meetings of the Ventura County Medical Society were held the second Tuesday of each month at the Colonial House in Oxnard with the exception of the annual meeting in December, which was held at the Ojai Valley Inn.

Our Public Relations Committee, headed by Dr. C. A. Smolt, has continued its very effective work and we feel that significant progress has been accomplished. In September a dinner was given for representatives of the press and radio in accordance with efforts to maintain a cordial and cooperative relationship. A central agency for collecting, editing and release to the press of articles and items of interest has been established. Our public relations information brochure was revised and improved, and increased distribution accomplished.

St. John's Hospital in Oxnard completed its new building and moved in shortly before the end of the year. It is a beautifully designed and exceptionally well furnished and equipped addition to the hospital facilities of our county.

The addition to the Ventura County Hospital is still under construction, and should be ready for occupancy about April.

Dr. Lewis Alesen, president of C.M.A., honored us with a visit at our October meeting and gave one of his inspirational talks.

The following officers will serve for the year of 1953: President, James M. Hunter, Ventura; president-elect, James H. Nelson, Ojai; secretary, Franklin K. Helbling, Ventura; treasurer, Robert E. Williams, Camarillo.

F. K. HELBLING, *Secretary*

SIXTH DISTRICT

Calaveras, Fresno, Kern, Kings, Madera, Mariposa, Merced, San Joaquin, Stanislaus, Tulare and Tuolumne Counties.

Neil J. Dau, Fresno, *Councilor.*

Fresno County Medical Society

With the increasing scope of the activities of the Fresno County Medical Society, many projects are necessarily continuing ones, some of which have been concluded during the past year, and several new ones which will extend

into 1953. However, some of our accomplishments in 1952 may be summarized as follows:

In cooperation with the Public Relations Department of the California Medical Association, public service announcements were run in all county newspapers twice during the year, and a series of health education programs were broadcast over three local radio stations. A brochure "Medical Care for All" was published for distribution to the public. Early in the spring, a joint dinner meeting with representatives of the press and radio was held.

Co-sponsored by the C.M.A., the third annual Post-graduate Institute was held in October.

The committee on professional relations has continued to serve as a judicial body in indicating to the profession and the public various standards of medical practice and procedures in the community regarding ethics, fees, etc. In number of cases considered, this year has been very comparable to the preceding years. For the most part, misunderstandings and disputes were settled amicably.

Beginning with the October issue, the Tulare County Medical Society was made a part of *The Bulletin* by inclusion of a section devoted to the activities of this society. At the same time, the publication was increased from 32 to 36 pages.

Monthly scientific programs have been good with attendance showing a slight increase over previous years. The first orientation program for new members and applicants for membership was presented at the December society meeting. Because of the interest shown in this first indoctrination course, it has been recommended that similar programs be presented from time to time. A brochure "The Door to Service in Medicine" was published for distribution to the membership. Membership in the society increased from 258 to 265 members of all classes. Five members entered military service during the year, making a total of eight members now on active duty. Twelve active members were lost when Madera County formed her own society.

Other projects included the organization of the staff and medical practices of the Valley Children's Hospital, launching the fast tempo x-ray survey, working out problems at the Fresno General Hospital relative to care of private emergency patients, Crippled Children's Service, polio care, psychiatric service and the planning of the new tuberculosis hospital.

Improved public relations has continued to be the primary consideration of the society, and every project, no matter how far removed from the field of public relations, has been designed to make a definite contribution to this end.

JOSEPH A. LOGAN, *Secretary-Treasurer*

Kern County Medical Society

Nineteen fifty-two was a very eventful year for the Kern County Medical Society. The doctors have worked through various means to demonstrate to the citizens of the county the vital role the doctors play in providing adequate health facilities for the residents of the county.

April 15 marked a very historical day for Kern County. This date climaxed a long period of planning and hard work by members of the society to provide a ready supply of whole blood. On this date the first blood was drawn at the Houchin Community Blood Bank. The physical plant was made possible through the generosity of Mr. Elmer Houchin, who contributed the funds for its construction. The California Blood Bank Commission loaned funds to the local bank which provided operating capital which will be repaid at the rate of fifty cents on each unit of blood drawn.

The earthquakes of July and August reduced the hospital facilities of Kern County to a dangerously low level. It behooved the members of the society to act at once setting into motion the necessary mechanics to not only rebuild the loss, but to build a new hospital. On September 8, Hill-Burton Act funds were made possible to this earthquake-ridden county in the amount of \$1,072,923 to rebuild Mercy Hospital to 120 beds and to build a new non-profit 103-bed Greater Bakersfield Memorial Hospital. Without any mechanics set up and without the aid of a professional fund raiser, the doctors put their shoulders to the wheel and raised almost two million dollars by January 8, 1953, in order to hold the Hill-Burton funds and bring closer to realization the long felt need of more private hospital beds. This campaign will continue until a total of three million dollars is raised. During 1953, rehabilitation will begin on Mercy Hospital and construction will be started on the new hospital. The Hospital Construction Committee is composed of Drs. H. W. Lange, W. H. Moore, F. J. Gundry, L. B. May, J. T. Stanton, F. O. Wynia, Seymour Strongin,

W. H. Macdonald, J. E. Vaughan, J. J. Coker, K. S. McKee, S. W. Iseninger, Sophie L. Goldman Rudnick, J. M. Kirby, Jack M. Hayes, and C. I. Mead. The community is deeply grateful to these individuals who have so generously given of their time and talents to fill one of the greatest needs this county has been faced with.

The Woman's Auxiliary, under the able leadership of Mrs. Jack M. Hayes, president; Mrs. Hall Ramirez, president-elect; Mrs. Robert Day, vice-president, and Mrs. J. Howard Varney, secretary-treasurer, working with untiring efforts, sponsored a benefit program to provide funds which will be used in the construction of the new hospital.

For the third year, the society has participated in the Hall of Health, a health display at the Kern County Fair. By the distribution of pamphlets and discussions with people passing through the booth, the public was informed of the activities and services of the doctors of the community. Also, members of the medical society donated 120 hours of service to provide the Fair Association with an attending physician.

In cooperation with the American Cancer Society and the Cancer Commission of the California Medical Association, the Cancer Committee provided the doctors of the county with a one-day Cancer Symposium.

The society holds regular monthly meetings the third Tuesday of each month. At these meetings the doctors are given an opportunity to hear outstanding speakers, not only in the field of medicine, but on any issue which directly or indirectly affects the health and/or welfare of the community.

On December 1, the society employed Eldon E. Geisert as executive secretary. Mr. Geisert is 29 years old, married and has one child. He has been a resident of Bakersfield since 1942. He is a veteran of World War II, holds a degree in Business Administration from University of California at Los Angeles and a license as a public accountant. He comes well recommended as experienced in the field of public relations. Our thanks to Mr. Vance V. Venables, who has served us so well during the past years. We wish him well in his new endeavor as Administrator for the County of Kern.

WILLIAM WINTHROP HALL, *Secretary-Treasurer*

Kings County Medical Society

The annual meeting of the Kings County Medical Society was held November 20, 1952. At this time the officers were elected for the year of 1953.

The society meets the second Thursday of each month. A scientific program followed by a short business session is usually held. The place of meeting varies from month to month in the different cities of Kings County.

WILLARD S. BRIDWELL, *Secretary*

Madera County Medical Society

The Madera County Medical Society received its charter and held its first meeting in January of this year. At present the society has 20 members who have completed a very energetic and successful year under the presidency of Dr. Smith Quimby.

Aside from organizing our own medical society, a staff has been organized at the county hospital for the first time. Also, a committee was set up to act as medical advisors to the county board of supervisors.

A public relations program was sponsored, in cooperation with the C.M.A., consisting of paid advertising in the local papers which advised the public of the medical services available county-wide.

The first time the doctors, lawyers, and dentists have ever had a get-together in Madera was under the sponsorship of the medical society.

The officers chosen for the second year of our society were: K. W. Butler, president; Omar Need, vice-president, and Herbert Weinberger, secretary-treasurer.

JACK A. BICK, *Secretary*

Merced-Mariposa County Medical Society

The pre-convention report of the Merced County Medical Society, District 6, is submitted herewith.

During the year 1952 four new members were admitted to the county medical society—John East, Richard Irvine, John Medefind and Robert Schiffler.

Two other members were elected and then transferred to San Joaquin County. They were A. W. O'Donnell and William Wheaton.

The following officers were elected for 1953: E. M. Soderstrom, president; William Fountain, president-elect

and vice-president; John East, secretary-treasurer; delegates to the C.M.A., Shelby Hicks and George Pimentel; alternates, Hugh Haas and Avery Sturm; board of governors for three years, Jerry Wolohan and Max Brannon.

During the year our county society cooperated with the C.M.A. public relations department in sponsoring "Your M.D." and "Get a Doctor," public service announcements, in all the papers of the county. We also are sponsoring the radio series over the local stations and we have approved the public service announcements of the Doctors' Public Service Committee, which will be run in the next month or so.

Regular meetings were held on the fourth Thursday of each month at the Hotel Tioga in Merced at 7:15 p.m. and visiting M.D.'s are always welcome.

HARRY R. MAYTUM, *Secretary-Treasurer*

San Joaquin County Medical Society

Dr. J. Earl Longley of Tracy served as president of the society in 1952. The expansion of the program of activities of the society has been greater than in any preceding year in its history.

The board of directors appointed Dr. John T. McNally to be chairman of a committee to secure an assistant to the secretary-treasurer. After interviewing and reviewing the qualifications of numerous applicants for the position, Boyd Thompson, son of a former Stockton physician, was chosen for the position in April. The choice was a happy one, as almost solely because of Mr. Thompson's hard work most of the programs carried on by the larger societies employing an executive secretary have been instituted. An office for the county medical society was opened in June and has just been moved to larger quarters in the American Trust Building.

Real progress has been made in the improvement of community press relationship. Members of our society met with representatives of the press in June at the first annual press-medical dinner. A code has been set up and given to our members to facilitate the prompt and accurate reporting of medical news.

A roster indicating the location, phone number and specialty of the members was published and circulated in August. Dr. James R. Powell is editor of the newly established monthly Bulletin. Its first issue appeared in September. It is devoted largely to local society news.

A group professional liability program has been adopted by the society which is optional to the members. Because of drastic premium increases and of policy limitations by the insurance carriers, most of our members are insuring in the new group plan as soon as their old policies lapse.

The establishment of a society office and an advertising program have combined to produce a great increase in the work of the Public Service Committee of which Dr. E. Gough is chairman. Some 140 complaints have been considered during the year and it is felt that their final disposition has created public good will.

After more than one year of study, Dr. Virgil Gianelli presented a new constitution and by-laws to the board of directors. It was approved by the board and the membership and is now in operation. Dr. Gianelli has also been active in a project to secure funds to be used in construction of a new wing at St. Joseph's Hospital. More than \$50,000 has already been pledged by the hospital staff and public contributions are now being solicited. Dr. L. P. Armanino again directed the annual Postgraduate Study Club lecture program. Dr. E. C. Harrington reports greatly increased activity by the local Red Cross Blood Bank. Approximately 60,000 pints of blood were drawn in 1952 of which more than one-half went to the defense program. The society has continued its regular weekly radio program and other programs sponsored by the C.M.A. were added. Eight scientific and two programs of general professional interest were presented during the regular meeting. Dr. Oliver Riggle of Lodi, after an illness of two years, died on April 19, 1952.

F. A. MCGUIRE, *Secretary*

Tulare County Medical Society

The Tulare County Medical Society has just completed another very successful year under the leadership of President J. H. Brady of Visalia. This society is composed of 82 active members and three retired members, and there are six applicants awaiting the completion of their six-month residency. During the past year, Gerald Casebolt and Charles M. McClure remained in military service, and Donald G. Lindsay and G. Wayne Powell entered military service from this county.

One signal honor that this society received through one of its members was the awarding of a fifty-year pin to Dr. Austin Miller of Porterville, which award was made at the California Medical Association meeting in Los Angeles in April of 1952.

During the past year a Library Committee was formed to work with the group at the Tulare County Hospital to establish an active, up-to-date library for the resident staff and attending staff at the hospital.

Through the efforts of the Fresno County Medical Society and members of our own society, space has been obtained in the Fresno County Medical Bulletin for the Tulare County society's use. We are providing two pages of advertising and are obtaining two pages for news items in this very useful medical bulletin. This been accomplished through the efforts of J. H. Brady, president of our society, and Patricia Tudbury, editor of the Tulare County section.

During the early part of the year, we cooperated with the Public Relations Bureau of the California Medical Association and were one of the first counties to put in the ads in the newspapers locally, establishing emergency telephone numbers in each of the communities, and the ad "Your M.D."

We had a very successful postgraduate course on Sunday, May 18, 1952, at which time visiting professors from the University of California at Los Angeles presented the program under the co-direction of Dr. George Amromin of Exeter, and Dr. Victor Badertscher of Dinuba. This course was well attended and with a \$5 tuition fee paid by the participants, was entirely self-supporting.

Our Program Committee was very active this year, headed by Dr. Vincent Dungan of Visalia, and several interesting programs were developed. During February and March, Drs. H. C. Hinshaw of Stanford University and Charles E. Smith of University of California presented papers at our meeting on bronchogenic carcinoma, pulmonary tuberculosis and coccidioides. These two meetings were made possible through the cooperation of this society and the Tulare County Chapter of the Tuberculosis Association. In May we were able to provide the speaker for the annual joint meeting with the Tulare County Bar Association, at which time we presented Dr. Ralph Gampell of San Mateo, who spoke on "Flight to Utopia," which is a very excellent talk on Dr. Gampell's experiences with the socialistic system in England and why he came to this country to get out from under such a program. We would recommend this talk to any of the societies which have not heard it, as he is a very interesting and forceful speaker.

We had an interesting ladies' night on November 20, at which Fred Frazer was the principal speaker.

On the other months of the year we had an annual visitation of the state officers of the California Medical Association, and Dr. Howard House of Los Angeles discussed ears, Dr. I. Y. Olch of U.S.C. discussed management of breast carcinoma, Dr. Longshore of the California State Health Department put on a program during the summer on equine encephalitis, and Dr. Robert Day of Bakersfield discussed dermatology, and Dr. Mischka Grossman discussed special procedures in diagnosis of congenital heart diseases. Dr. Mark Zeifert discussed neurology in private practice.

Officers elected at our regular December meeting on December 18, 1952, are Robert D. Karstaedt, president; Vincent M. Dungan, secretary-treasurer; J. J. McNearney, vice-president; Frank Kohn, member of the Board of Censors. Delegates to California Medical Association House of Delegates are James E. Feldmayer and Robert D. Karstaedt. Alternate delegates are C. H. Johnson and Ralph Miller.

ROBERT D. KARSTAEDT, *Secretary-Treasurer*

SEVENTH DISTRICT

Monterey, San Benito, San Mateo, Santa Clara and Santa Cruz Counties.

Hartzell H. Ray, San Mateo, *Councilor.*

Monterey County Medical Society

The Monterey County Medical Society had a very successful year in 1952. The caliber of the scientific programs was exceptionally good. We cooperated 100 per cent with C.M.A.-sponsored radio programs and public relations advertisements.

We joined with Santa Cruz and San Benito counties in a combined meeting to foster better relationships and friendship with our neighboring medical brethren.

We sponsored a Boy Scout health lodge at the new Boy Scout camp and have raised one-third of its total cost of \$6,000 during the past year.

Our public relation has been very good and we hope to keep it that way.

The new officers for 1953 are: President, H. M. Stufflebam; secretary, Horace F. Hussar; treasurer, Joseph J. Shebl; president-elect for 1954, Allen C. Mitchell; delegates, James H. McPharlin and Ernest Simard; alternates, Allen C. Mitchell and Howard C. Miles.

We feel sure the year 1953 will be equally successful.

FRANK P. CUSENZA, *Secretary*

San Benito County Medical Society

The first meeting of the year was held at the Holland Hotel on the evening of January 15, 1953, in Hollister. Dr. David G. Young, Jr., president of the local society, introduced to the society members and their wives Dr. Green, president-elect of C.M.A.; Dr. Hartzell Ray, regional councilor, and Glenn Gillette, public relations officer of C.M.A. Dr. Green presented a most enlightening talk on medical education endowment and the procurement program for prospective nurses.

Prior to the dinner meeting cocktails were served to the guest speakers and the doctors and their wives in the reception room of Dr. David G. Young, Jr.'s newly completed medical building.

San Mateo County Medical Society

The year 1952 has seen the San Mateo County Medical Society grow to a total of 334 members of all types. This society has taken a leading role in negotiations with labor unions and other organizations interested in designing satisfactory health and welfare programs, and considers this phase of its activity one of the most pressing issues for the coming year. Several programs during the year were devoted to this subject. Other programs dealt with scientific subjects and there was also a very successful barbecue attended by members and their wives.

Dr. Alf T. Haerem was elected president and Dr. Bradley C. Brownson president-elect for 1953. Dr. Jackson T. Flanders of Redwood City was made the new secretary-treasurer.

The growth in membership has made the society eligible for its sixth delegate and alternate delegate to the C.M.A., who were duly elected.

The society publicized its public relations program in newspaper advertising which met with popular acclaim.

BRADLEY C. BROWNSON, *Secretary*

Santa Clara County Medical Society

As 1952 draws to its inevitable conclusion, it is the duty, I believe, of your president to render in summary form an accounting of the highlights of the year. Fortunately no decisions of momentous importance were thrust upon us. However, following the pattern of the last several years, your society has pushed relentlessly for wider recognition and has assumed willingly the added responsibilities which this recognition demands.

In the field of local government cooperation we asked for and were accorded the privilege of acting as the screening body in selecting the Director of County Institutions. It was at our instigation that the unfair provision in the county charter which denied seats on county boards and commissions to physicians who serve voluntarily without pay on the staff of the County Hospital was successfully removed by the electorate.

In the field of voluntary health insurance we have expressed a willingness to experiment. Should it not conflict with the plans of the study committee on Prepaid Health Care of the California Medical Association we may institute on a county-wide basis the pilot program for a deductible-type insurance to be issued by California Physicians' Service. In addition, we have assisted the latter organization in setting up a complete processing office for C.P.S. claims at the county level.

Public relations was an important item this year. Most significant was our decision to broaden our relationship with the press by permitting the use of doctors' names in connection with feature articles detailing new discoveries or techniques or human interest stories. The work of our Public Service Committee in resolving doctor-patient misunderstandings deserves special mention here.

Most noteworthy, perhaps, was the action to really get going on a building program. By authorizing the purchase of real estate, this project has taken a tremendous spurt and it is hoped that with careful planning a long cherished hope will soon come true.

I wish to express my unbounded gratitude to all those officers, councilors and committee members who assisted me so faithfully and well in directing the affairs of the county medical society. It would be unfair to single out any individual or group since everyone who was asked to perform a task responded willingly and with enthusiasm.

We all owe a special vote of thanks to Mr. Joseph Donovan who possesses that rare gift-combination of cheerfulness, patience and efficiency. His aid and assistance reaches into almost every phase of medical society activity. The Auxiliary, also, should be mentioned for its willing cooperation whenever a request for assistance was made.

To Dr. George Waters and his incoming officers, my sincere best wishes for the ensuing year.

ALBERT R. CURRILL, *President*

Santa Cruz County Medical Society

Dr. J. A. Ludden, Jr., of Watsonville served as our president during 1952 and a very successful year was recorded. As in the past the system of bi-monthly meetings was continued. Meetings are held at Deer Park Tavern, Aptos, which is centrally located for members coming from both ends of Santa Cruz County. The January meeting was devoted to the annual visit of C.M.A. officers who brought the members up to date on C.M.A. and legislative matters. The Society cooperated with the C.M.A. public relations department in sponsoring public service announcements in all newspapers of the county.

In March Dr. H. Clare Shepherdson of San Francisco presented a paper on Diabetes Mellitus. The May meeting was addressed by Dr. E. Overstreet of the University of California Medical School who talked on Infertility and also on Dysmenorrhea. Dr. Frederick Reichert of Stanford was with us in July and talked on the subject of Pain of Sympathetic Origin. In September the counties of Santa Cruz, Monterey and San Benito held a joint meeting and the speaker was Dr. Frank Tallman, State Director of Mental Hygiene, who presented a paper on Treatment of Mental Illness. The November meeting had as speaker Dr. Roy Cohn of Stanford who addressed the gathering on the subject of Abdominal Pain as an Entering Complaint. The annual business meeting was held at this time and Dr. P. E. Karleen of Soquel was elected president for 1953.

SAMUEL B. RANDALL, *Secretary*

EIGHTH DISTRICT

San Francisco County.

M. Laurence Montgomery, *Councilor.*

San Francisco Medical Society

Probably the most significant development of the year in San Francisco in 1952 was the impact on the members of this society, as well as the public, of what has become known as the "Weinerman Report" and the highly publicized demands of its sponsors, the San Francisco Labor Council.

Insisting that health coverage for union members and their families in San Francisco was inadequate, the report which was released to the local press by the Labor Council, called for the establishment of health centers, fee schedules, and numerous other projects. This suggestion of a possible change in the trend of the practice of medicine—one with widespread implications—called for immediate action by the board of directors. A special Union Labor Health Plan Study Committee was appointed to analyze and review existing labor and other health and welfare plans, as well as the demands and proposals of the Labor Council. Prompt cooperation and assistance came from the A.M.A. and the C.M.A. in the form of their representatives conferring with the Study Group. Other medical societies throughout the United States, in answer to inquiries regarding health plans in existence in their territories, also extended all possible cooperation. The membership of the society was advised, at two general meetings, of the various aspects of the problem, and all information gathered by the committee was presented.

In October, a questionnaire was sent to the membership which asked three pertinent questions: (1) What position should the San Francisco Medical Society take with regard to the present change in union health and welfare plans within the city of San Francisco? (The change referred to is a plan to establish a health center under a panel system, and to discard the right of free choice of physician.) (2) Should the medical society formulate a plan of its own to be set up and approved by the society under which services would be rendered to any and all

prepaid medical plans which meet the approval of the society? (3) If such a plan is formulated, it will require the adoption of a fee schedule to apply to income brackets below a certain income and subject to periodic revision. It must further be under the direct control of the membership of the S.F.M.S. Would you approve of further effort to formulate a fee schedule to be presented to the members at a later date for their consideration?

Of 890 questionnaires returned, question No. 1 was disapproved in principle by 832 members; 776 said "yes" to question No. 2, and 779 approved question No. 3 regarding the formulation of a fee schedule.

The study group reported the results to the board of directors and recommended that: the society's Union Labor Committee contact union labor leaders and let them know the results of the questionnaire; all of the fallacies existing in the Weinerman report should be pointed out to the Labor Council; an attempt should be made to convince labor officials that the medical profession and labor leaders have the same basic objective, namely, to improve medical care in San Francisco, and have labor work together with the medical society in working out our approved or accepted principles; the union labor committee also to do everything possible to make existing plans function well.

The study group further recommended that new or existing committees be given the task of studying the proposed fee schedule as well as the proposed society-sponsored plan for approval of health plans, and that another special committee be appointed to work out a good positive public relations program; also in order that their work might be closely integrated, a coordinator should be appointed.

The board approved the report and followed through on the recommendations; the committees have been at work for several months, and it is felt that 1953 will be a most decisive year for the members of this society.

One hundred and twenty-nine new members were admitted to the society during 1952, and we suffered a grievous loss when death took 24 of our members.

An important project was completed when the society, after a long-time search, found a suitable piece of property at Turk and Masonic streets, on which, in time, a new building will be erected to house our administrative offices, an auditorium capable of seating 1,000 persons, and with adequate facilities to handle the growing activities of the society's blood bank.

Because of the increasing demands for the appearance of physician members on radio and television, the society's committee on those mediums drew up the following criteria to govern all public appearances by members. (1) The individual (physician) appearing should present himself with proper professional bearing; (2) he shall make no reference to himself; (3) he shall have a worthwhile educational message; (4) he shall prepare himself thoroughly in advance; (5) he shall forward his radio or television script prior to appearance; (6) he shall be limited to three appearances yearly except under conditions where other personnel are not available. In addition, the committee, with the approval of the board of directors, organized a panel of physician-members who are available for radio and television appearances, as well as public addresses, when necessary.

All local radio and television broadcasting companies, and major health and quasi-medical organizations were advised of the formation of the panel, and of the above criteria, so that as far as possible the scheduling of radio and TV appearances will be centralized through this society.

In the field of public service, we continued to help the community by means of our well-established emergency referral service, our Bureau of Medical Economics, our blood bank, and our Professional Relations Committee. In addition, this society presented two open panel discussions for the benefit of the community; one on the subject of arthritis, and the other on cancer. Both meetings were well attended, and similar sessions are planned for the future, in order that authentic medical education may be made available to as many people as possible.

The society's scientific sections continued to meet monthly, and in addition two banquet meetings were held during the year; one in honor of J. C. Geiger, retiring director of public health, and Karl Meyer, who was also lecturer of the evening, and the other featuring J. Garrott Allen, professor of surgery, University of Chicago, in an excellent summation of current concepts of ulcerative colitis.

The society's chest minifilm service is entering its fifth year. During its four years of operation a total of 49,527

minifilm chest examinations have been made, and one in 25 were reported as suggestive of tuberculosis.

From November 1, 1951, through October 31, 1952, a total of 112,522 net donors have contributed to the Irwin Memorial Blood Bank of the San Francisco Medical Society, an increase of 24,726 blood donations over the 1950-51 procurement. The bank continues to actively participate in the Armed Forces blood program, and is now cooperating in the newly organized national blood program which promotes blood donations for the Armed Forces, civilian blood needs and civil defense. The society's bank has distributed over 130,075 units of whole blood for the defense program through October 1952. In addition, transfusion therapy is provided upon request of local medical societies, to Shasta, Siskiyou and Mono counties in California and western Nevada. Blood is procured from these counties by means of the Southern Pacific blood donor car *The Life Line* which was officially dedicated and assigned to our bank in November of 1951. Blood donations are credited to the individual county blood reserve funds. Our bank, in turn, routinely stocks designated hospitals in each area with blood of all types from which other hospitals in the county draw. Donor replacements for units used are automatically withdrawn from the county's fund. This plan has proven very satisfactory.

At the beginning of 1952, the society's Committee on History and Obituaries undertook the preparation of the history of this society. An account of the early attempts to form a San Francisco Medical Society started in the February 1952 issue of the *Bulletin*, and has been appearing each month until the January 1953 issue, in which Section I, covering the period 1859-1868, was concluded. The next section dealing with the formation of the present society (which was 85 years old in February) will start in the March 1953 issue of the *Bulletin*, and will continue on until the present era is reached.

The Hearing Center has made great strides toward fulfilling its objectives. Incidentally, San Francisco is the only city to have a full-fledged Aural Rehabilitation Center under the guidance of its county medical society, serving all doctors and the entire community.

Space does not permit discussion of the various other activities of this society and its committees. As always, the society has striven to serve the community and its membership. Its objects remain as outlined in its constitution: "to promote and develop the science and art of medicine, to conserve and protect the public health, to promote the betterment of the medical profession . . ."

Much was accomplished under the leadership of Stacy R. Mettler in 1952. As we go forward into 1953 with our new president, Edmund J. Morrissey, we feel the problems ahead will not be easy to solve. Some are vital, and decisions will have to be made, as President Morrissey stated in his January message to the membership, "which may influence the trend of medicine, not only in our own locale, but even on a national scale." We keenly feel our responsibilities, and will do the best we can to find the right answers.

DONALD MCLEAN CAMPBELL, *Secretary-Treasurer*, 1952

NINTH DISTRICT

Alameda and Contra Costa Counties.

Donald D. Lum, Alameda, *Councilor*.

Alameda-Contra Costa Medical Association

At the close of 1952 there were 1,396 members of the Alameda-Contra Costa Medical Association. During the year the association's by-laws were amended to provide opportunity for eligible aliens to become members of the A.C.C.M.A.

Plans for a new A.C.C.M.A. blood bank and headquarters building have been approved by the Council, and construction is expected to be completed in mid-1953.

The Committee for Graduate Medical Education of the A.C.C.M.A. and the Institute for Metabolic Research at Highland-Alameda County Hospital are offering a post-graduate course in metabolic and endocrine diseases at the hospital from February 2 to February 7. Arrangements have been made by a committee headed by Dr. Laurance W. Kinsell, director of the Institute for Metabolic Research, and will include a faculty of 42 outstanding medical teachers.

The association lent to the California Medical Association the half-time services of its executive secretary, Mr. Rollen Waterson, to serve as executive secretary of the C.P.S. Study Committee.

GRANT ELLIS, *Secretary*

TENTH DISTRICT

Del Norte, Humboldt, Lake, Marin, Mendocino, Napa, Solano and Sonoma Counties.

Warren L. Bostick, *Councilor*.

Humboldt County Medical Society

As in the past few years, 1952 saw the continued growth of the Humboldt County Medical Society by the addition of new members representing both general practice and various specialties.

Our monthly meetings, under the guidance of President Frank O'Neil, were well attended since many important business matters of interest to all were usually on the agenda. Our scientific programs consisted chiefly of case discussions, C.P.C. reports, and an occasional talk by a visitor or some member of the society. Our hospital staff meetings filled in to a great degree on the academic problems.

Nineteen fifty-two also saw the start of what everyone hopes will be a permanent C.M.A. program—that of a postgraduate lecture series for the northern counties. Under the able guidance of Dr. C. A. Broadus, ten weekly lectures were given by various members of the staff of the Stanford Medical School. Each week the discussions were lively and lengthy, usually having to be brought to an end because of the late hour. Our society was well represented at all meetings, and we hope that they will be continued in 1953.

For the year '53 we start with the following officers: E. Kenneth Smith, president; Clarence Crane, Jr., vice-president; James S. Eley, treasurer; John W. Schonwald, recording secretary; Ted W. Loring, corresponding secretary. Nineteen fifty-three will provide us with a new St. Joseph's Hospital and a completely remodeled general hospital, thus providing for the community very much improved medical facilities.

TED W. LORING, *Corresponding Secretary*

Napa County Medical Society

The Napa County Medical Society held meetings each month in 1952 with the exception of August. We were privileged in having the following guest speakers who discussed topics in their respective fields: Dr. Francis Chamberlain, Dr. Harry Blackfield, Dr. John W. Green, Dr. Jack Benedikson, Mr. Tom Hadfield, Dr. Robert Sherman, Dr. William Porter Forcade and Dr. L. J. Regan.

Our March meeting was held, as usual, at the Napa State Hospital where the society was the guest of the institution.

In June of this year, it was Napa County's pleasure to be host to Solano, Marin and Sonoma counties at the annual four-county meeting. The dinner meeting was preceded by a "sizzling" golf tournament in the afternoon. Ninety-six doctors were present.

In September, Dr. Dale E. Barber, president of the society, was host to its members and guests, giving a barbecue dinner at his home. Dr. Warren Bostick, our new District Councilor, was introduced to the society by the C.M.A. president-elect, Dr. John W. Green. The society was also honored at this meeting by the presence of Mr. Ben Read, Mr. John Hunton, and Mr. Ed Clancy.

The November meeting was held at the veterans' home in Yountville with Colonel Holderman and Dr. Hohnstein hosts for the evening. Their hospitality is unparalleled and certainly most welcome. At this time the following officers were elected for 1953: President, Fred Heegler; vice-president, Harold James; secretary, Merle Godfrey. Delegates elected to the C.M.A. were Dale E. Barber and his alternate, Herbert Messinger, and Walter H. Brignoli and his alternate, Donald B. Marchus.

In an effort to bring medical men in closer relationship with other professions, a joint meeting was held with the Napa County Dental Society in April. Their California president, Dr. Jack Benedikson, was speaker for the evening, talking on the fluoridation of water. In December, a joint meeting was held with the Napa Bar Association, our speaker being Dr. L. J. Regan of Los Angeles whose subject was of mutual interest to both societies.

The Napa County Medical Society has supported 100 per cent the public relations program of the C.M.A. for 1952.

This year the society suffered the loss of our very able and respected secretary, Dr. Robert Starr Northrop. His death was a great loss not only to the society, but to the community as well.

The meetings of 1952 were most educational and exceedingly well attended.

DALE E. BARBER, *President and Secretary*

Solano County Medical Society

The activities of the Solano County Medical Society were under the able guidance of our president, Dr. Harry Lammel, and Dr. Melvin Schmutz, program chairman, who were responsible for many varied and interesting programs during the year, which included the following:

Dr. Benson Roe discussed "Surgical Diseases of the Esophagus." Mr. Hassard, attorney for C.M.A., spoke on "Corporation Infringement of the Professions." Dr. Seymour Farber presented a lecture on "Diseases of the Chest." Dr. Felix Pearl presented and illustrated a lecture on "Recent Advances in Cardiac Surgery."

In February the society was guest of the Travis Air Force Base hospital staff. An excellent program was presented by Lt. Col. J. T. Dresser who talked on "Review of Recent Advances in Orthopedics," and Col. A. H. Corliss and Lt. Dawson on "Medical Problems of An Aerial Debarcation Hospital."

The Solano County Medical Society was proud to have one of its members, Dr. John W. Green, elected as president-elect of the California Medical Association. Dr. Green has been active in local, state and national medical affairs for many years and we pledge him our wholehearted support for 1953.

The society took great strides this year in setting up a more efficient public relations program and with the able assistance of Ed Clancy and Glenn Gillette we are now bringing the county medical society before the public.

The newly elected officers for 1953 were Dr. Milton B. Smith, president; Dr. Carl V. Reichman, vice-president; Dr. Herbert L. Joseph, secretary-treasurer.

WM. R. HOOPS, *Retiring Secretary-Treasurer*

Sonoma County Medical Society

Nineteen fifty-two saw the Sonoma County Medical Society carrying forward the progressive program formulated during the past three years. The leadership of Dr. Leonard W. Hines, president, inspired the society to a highly successful effort.

The activities of the society were funneled through the central office in charge of F. L. Manker, a local attorney, the society's executive secretary and legal adviser.

A new constitution and by-laws was published in 1952, and a copy provided to each member of the society.

The members have continued to benefit by the group contracts with the American Mutual Liability Insurance Company and the National Casualty Company. The collection contract with the Redwood Empire Adjustment Bureau has continued to prove advantageous to all.

This society was especially active in public relations this year: Emergency listings were placed in the telephone directory; radio programs were presented; a press code of cooperation was published; several health forums were held as a function of the Speakers' Bureau and, in liaison with citizens of the community, the society helped to procure a new wing for the county hospital.

Seventeen new members were added in 1952, bringing the total active membership to 128 at the end of the year.

Intrasociety relations were improved by the continued and expanded publication of our monthly *Bulletin*, and by excellent scientific programs. Speakers included Drs. Joseph Catton, Loren Chandler, Emile Holman, Lowell Rantz, Harold Faber, Robert Newell, Karl Schaupp and Robert Westphal. A two-day North Coast Counties Institute, sponsored by the California Medical Association Committee on Postgraduate Activities was held in February. Joint meetings were held with the Woman's Auxiliary, including our annual barbecue in August at the home of Dr. and Mrs. William Makaroff. In October a joint meeting was held with the dentists, attorneys, pharmacists and veterinarians of the county, which was addressed by Dr. John Cline on the subject of Medicine in Politics.

In November, the annual visit of the officers of the California Medical Association, including Dr. John Green, Dr. Warren Bostick, Mr. John Hunton and Mr. Glenn Gillette, was a memorable one.

FRANK E. LONES, *Secretary-Treasurer*

ELEVENTH DISTRICT

Alpine, Amador, Butte, Colusa, Eldorado, Glenn, Lassen, Modoc, Nevada, Placer, Plumas, Sacramento, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, Yolo and Yuba Counties.

Wayne E. Pollock, Sacramento, *Councilor*.

Butte-Glenn County Medical Society

The Butte-Glenn Medical Society has had a profitable year largely due to the hard work of its president, Dr. Meredith Guernsey. Active committees have functioned throughout the year, especially the Public Service Committee, the Public Health and Public Relations. The Public Service Committee has forestalled at least four nuisance malpractice suits and is now organized to effectively handle future demands. The Public Relations Committee with the aid of the C.M.A. Public Relations Department has advertised the society's effective call systems and the public service activities. The Insurance Committee has established a working malpractice prevention program with American Mutual Liability Company. An active liaison committee has been established between the Butte County Hospital staff and the Board of Supervisors of Butte County. Dr. Hollis Carey was elected to be a Councilor-at-Large for the C.M.A. and is working hard and effectively for the medical interests.

There has been a large influx of new doctors to our counties and the society now numbers 55 active, five inactive and 12 prospective members. The society deeply feels the loss of Dr. John White who died in November 1952.

Dr. Donald Casey was elected president for 1953, Dr. Thomas Elmendorf, vice-president, and Dr. J. O. Chiappella again assumed responsibility as secretary-treasurer, a job he previously held for thirty years.

W. C. CHIAPELLA, *Secretary*

Placer-Nevada-Sierra County Medical Society

The Placer-Nevada-Sierra Medical Society held regular monthly meetings on the second Wednesday of each month except for June, July and August 1952. One meeting (May) consisted of a medical cancer symposium sponsored by the California Medical Association Cancer Commission and the California division of American Cancer Society.

The December meeting was a dinner meeting and Christmas party held in conjunction with the election of officers.

Officers elected for 1953 are as follows: President, Carl Jackson; vice-president, John R. Topic; secretary-treasurer, T. J. Rossitto; delegates to C.M.A.: Wm. Miller and Harry March; alternate delegates to C.M.A., Saul Ruby and Max Dunievitz.

Our medical society has been cooperating with the C.M.A. public relations department in sponsoring the public service announcement in all newspapers of the Placer, Nevada and Sierra counties.

T. J. ROSSITTO, *Secretary-Treasurer*

Sacramento Society for Medical Improvement

Organized in 1868, our society is the oldest medical society in the state of California and has enjoyed steady growth since its inception. The society now has 274 members. Society meetings are held on the third Tuesday of every month. An annual banquet is held on March 17, St. Patrick's Day, the anniversary of the foundation of the society. The December meeting is an annual business meeting, at which time the board of directors, C.M.A. delegates and the secretary-treasurer are elected. The president and vice-president are then elected from among members of the board at the January board meeting.

In 1950, the society hired a full-time executive secretary and launched a broad and extensive public relations program. As part of the program it has publicly announced an unqualified guarantee to every resident of the community of good medical care, 24 hours a day, regardless of ability to pay.

In order to fulfill the guarantee, the society maintains a central office which renders assistance in problems pertaining to medical care; maintains a 24-hour medical telephone exchange; social service handles referrals of part-pay or those unable to pay cases requiring medical services; referral service provides names of doctors and information regarding their education, training and field of practice; information service answers questions regarding medical care facilities and services; operates Sacramento Blood Bank; and Professional Conduct and Ethics Committee hears and attempts to adjudicate differences and disputes between a patient and his physician.

FRANK G. SCHIRO, *Secretary*

Shasta County Medical Society

The Shasta County Medical Society now has 27 active members, there having been two new admissions. Several scientific and social meetings were held, including a meeting addressed by Mr. Howard Hassard at which the Shasta County Bar Association and Dental Society were our guests.

Arrangements were made by the society with the Irwin Memorial Blood Bank so that through the use of the Southern Pacific *Life Line* blood donor car, the county's blood banking needs are being supplied. This has proven to be a most helpful service to the community, pending the construction of the Shasta Cascade Regional Blood Bank in Redding. Plans are progressing rapidly for this permanent community blood bank under the auspices of the Shasta and Siskiyou County Medical Societies.

The society has cooperated with the C.M.A. public relations department in establishing emergency referral numbers and sponsoring the "Your M.D." public service announcements. A series of weekly radio programs using A.M.A. transcriptions has also been instituted.

Plans are under way to establish in the coming year a loan fund for needy medical students from Shasta County. A yearly per capita donation by the society to the National Medical Education Foundation has been approved.

Officers for 1953 are Louis Nash, president; H. Harper Thorpe, vice-president, and Henry R. Eagle, secretary-treasurer.

Regular meetings of the society are held on the first Monday of each month.

HENRY R. EAGLE, *Secretary-Treasurer*

Siskiyou County Medical Society

Calendar year 1952 Siskiyou County Medical Society report follows:

We are particularly proud of the steps that our society has taken this year. We have cooperated with the A.M.A. and C.M.A. public relations programs in sponsoring the movie short "Your Doctor" in all local theaters, in displaying the plaque "To All My Patients," in our offices to encourage the discussion of fees, etc., in having our Public Relations chairman attend the fifth annual Public Relations Conference in Denver in November. We have cooperated with the C.M.A. public relations program by promoting A.M.A.-produced radio programs in both county stations, publicity in our local newspapers of our Public Service Committee and our emergency call system and the meaning behind "M.D."

On our own initiative we have done the following:

1. Created an information sheet, explaining all the anticipated charges of hospital, anesthesiologist, surgeon, assistant, etc., which is presented to all patients before or on entering our hospitals.
2. Promoted a successful campaign to procure blood with the aid of the Irwin Memorial Blood Bank group and the Southern Pacific *Life Line* car, and now have available blood stored in each end of the county.
3. Established a Public Service Committee.
4. Adopted a press and radio code.
5. Helped "delay" the increasing socialistic trend in the U.S.A.
6. Established a speakers' bureau wherein each society member has prepared a topic relating to our profession. A brochure of the speakers and their subjects has been distributed to civic organizations and interested groups. We are all on call as speakers.

For a small society of 16 members, we feel we have contributed a great deal, at grass roots level. Under No. 5 of our efforts, we feel the use of the word "delayed" instead of "defeated" advisable. As a motto perhaps, we should revive the old phrase, "We have not yet begun to fight."

E. V. ANDERSON, *Secretary*

Tehama County Medical Society

We feel that Tehama County has been forward-looking and progressive in its anticipation of further growth. The new district hospital in Corning and the new addition to the Sisters' Hospital in Red Bluff is adequate to care for the present and any foreseeable increase in population.

The Corning Memorial Hospital opened for admission of patients in January 1952 and there immediately arose a community controversy on the admission of an osteopath to the staff. The board of directors vetoed an osteopath on the staff, so at election time this fall an osteopath ran for a directorship. The public defeated him by a two-to-one vote.

The Tehama County Medical Society has been active in the C.M.A. grass-roots program, having publicized emergency telephone numbers in all newspapers of the county as well as a "Your M.D." copy. Likewise the society is sponsoring medical radio programs for a six-month period.

O. T. Wood, *Secretary*

Yolo County Medical Society

The Yolo County Medical Society held regular monthly meetings during the year except in July and August. At each meeting a paper was presented and a discussion was held by outstanding medical and surgical specialists on a variety of subjects related to the practice of medicine.

The society was active in support of the local civilian disaster committee, both by participation and advice on medical problems.

In addition to individual contributions, the society voted an assessment against its treasury to be transferred to the American Medical Education Foundation.

A committee on publicity and one on heart, advisory to the county chapter of the California Heart Association, were formed during the year.

Dr. Herbert Bauer succeeded Dr. John Rafferty as public health officer for Yolo County.

New members admitted during the year were Dr. Bernard Kordan, Dr. Robert G. Adler, Dr. William S. Freeman, Jr., Dr. James Henry Kimbell, and Dr. Herbert Bauer.

RICHARD D. CUNDIFF, *Secretary*

Yuba-Sutter-Colusa County Medical Society

Ten meetings were held during the year.

Deaths: John A. Duncan, Peter J. Cress, Ira Higgins, and F. W. Didier.

Four malpractice cases were considered.

The guest speaker at the January meeting was Dr. John M. Baker of Sacramento, who presented a paper on thoracic injuries.

Mr. Glenn W. Gillette, associate director of public relations for C.M.A., discussed local newspaper publicity regarding emergency medical service sponsored and paid for by C.M.A. through the local society.

Guest speaker at the February meeting was Dr. Edward A. Macklin of the Langley Porter Clinic, who gave a very fine paper on the use of Antabuse® in problem drinkers.

Guest speaker at the April meeting was Dr. John M. Kenney, who spoke on the subject of "American Cancer Society."

A paper was read by Dr. Neal M. Loomis on medical ethics.

A special meeting was held in July, its purpose to discuss malpractice suits.

The annual banquet was held September 9, 1952, for the Yuba-Sutter-Colusa County Medical Society and the Auxiliary. Dr. John W. Green, president-elect of C.M.A., was principal speaker. Other speakers were Mr. Ed Clancy, director of public relations, C.M.A.; Mr. Glenn Gillette, associate director of public relations, C.M.A., and Mr. Ben Read of the Public Health League.

A business meeting was held in October.

A special meeting was held October 28, 1952, for the further discussion of malpractice suits.

At the November meeting the guest speaker was Mr. Edward Midland, exchange professor from England, who spoke on the British system of socialized medicine.

At the December meeting Dr. Frances P. Wisner as senior delegate gave a report of the recent meeting of the House of Delegates of the California Medical Association.

The following officers were elected for 1953: president, William J. Vasquez; vice-president, William R. Taylor; secretary-treasurer, Robert I. Hodgins; delegates, Frances P. Wisner and Stanley R. Parkinson; alternates, Charles B. Kimmel and Joseph J. Salopek.

Seven doctors were elected to membership during the year, also several physicians have moved from here to other locations.

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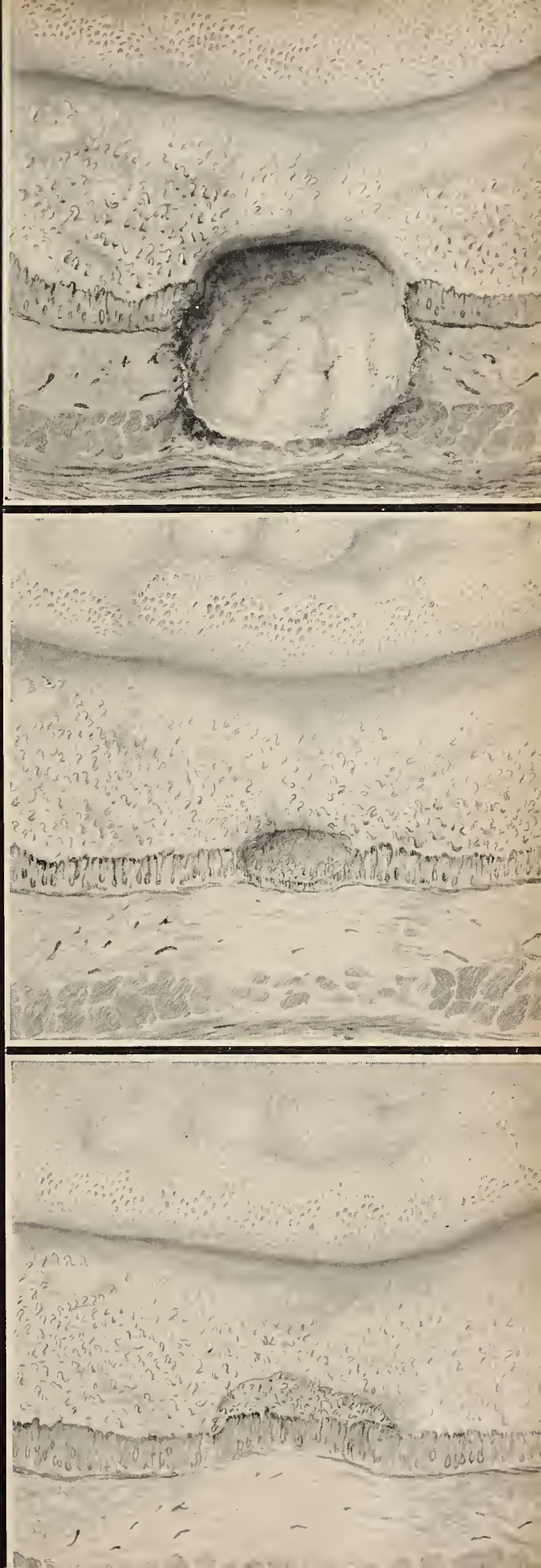
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Top—Section through duodenal bulb just distal to pylorus through center of ulcer crater.

Center—Healing ulcer with scar tissue and regeneration of tissue layers.

Bottom—Healed ulcer with restoration of mucosa.



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Excess Hair Removal a Serious Medical Problem

Excess hair on a woman can be corrected safely.

However, although few persons realize it, removal of such hair is a medical problem of the most serious type and should be handled only by those who understand and are sympathetic with the peculiarities of the situation, according to Mrs. Veronica L. Conley, Chicago, assistant secretary of the American Medical Association's Committee on Cosmetics.

"There is no such thing as a routine treatment for hirsutism," Mrs. Conley wrote in a recent issue of *Today's Health*, published by the American Medical Association. "Each person must be studied physically and psychologically to determine the appropriate treatment."

Studies of excessive hair growth have revealed four consistent factors, she pointed out, adding:

"First, although many theories have been explored, the cause is undetermined. Second, more and more attention is being given to the serious psychological implications. Third, measures for satisfactory management of excess hair are available in the vast majority of cases. Fourth, measures which may have temporary excellent results—but dangerous and disfiguring end results—are also available."

When no abnormal physical conditions are present, hair removal may consist of making hair less obvious by bleaching or by permanent or temporary removal, according to Mrs. Conley.

Bleaching may be satisfactory if hair growth is slight on the face or if only the legs and arms are involved, she said. It has the advantages over other measures of being painless, harmless to the average skin, and eventually damaging to the hair.

Whether temporary or permanent removal of hair is best depends on the character of the hair, the proximity of the hair follicles, the area and amount of growth, and the physical and emotional status of the person, Mrs. Conley said.

"There is considerable difference of opinion on the best way to remove facial hair temporarily," according to Mrs. Conley. "Some dermatologists strongly discourage shaving, tweezing or use of abrasives, particularly on the face. They suspect that these measures may result in stronger, thicker, harder and more pigmented hair. A more immediate danger is the effect of a razor's wear and tear on tender facial skin.

"A better approach, say these dermatologists, is cautious cutting with bent scissors without pulling, plus bleaching with hydrogen peroxide solutions of different strengths."

Permanent removal of excessive hair can be undertaken successfully only if the patient understands that it is a long, tedious, somewhat expensive and uncomfortable process, Mrs. Conley pointed out.

(Continued on Page 64)



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1. Goldfarb, A.E., N.Y. State J. Med. 44:1111 (May) 1944.

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Excess Hair Removal a Serious Medical Problem

(Continued from Page 58)

Permanent removal is accomplished by insertion of a needle into the bulb of each hair and the destruction of the tissue by the application of either galvanic current or high frequency, long wave diathermy.

However, she stressed that such treatment should be given only by a competent, trained technician, as

improper treatment may result in scarring. Mrs. Conley suggested that a person desiring such therapy should seek the recommendation of a physician or a qualified operator.

Mrs. Conley also warned against the patronization of establishments which claim quick, painless hair removal. Such places very often employ x-ray treatment which may produce such serious after-effects as leathery and wrinkled skin, ulceration and even malignancy, she added.

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President's Brother Hits Socialized Medicine

Speaking in New York recently at a dinner of the American Heart Association, Dr. Milton S. Eisenhower, president of Pennsylvania State College, and brother of the President, vigorously attacked socialized medicine and avowed his "passionate" belief in

private enterprise. He told his audience that "the socialization of medicine would be a fatal step that would lead to the loss of economic freedom, and, therefore, to the loss of political and personal freedom, too."

—From the *A.M.A. Washington News*

C. M. A.

ANNUAL MEETING

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PHYSICIANS WANTED: MEDICAL DIRECTOR, hospital, salary \$750 plus maintenance, house, etc.; ASSISTANT MEDICAL DIRECTOR, pharmaceutical company, salary open; PEDIATRICIAN, with real interest in clinic practice, to head department outstanding group, salary open, future partnership; OBSTETRICIAN-GYNECOLOGIST, to join excellent group not far from San Francisco, salary, then partnership; PATHOLOGIST, to associate with two other pathologists, starting salary \$12,000; ORTHOPEDISTS, (3) North, South and San Francisco Bay Area, salaries, then partnerships; OPHTHALMOLOGIST, Board certified for association with another ophthalmologist in private practice. Financial arrangements open, guarantee plus percentage, then partnership after one year, Southern California. INTERNISTS, several interesting openings with groups, salary and partnerships; OTOLARYNGOLOGISTS, (1) to join outstanding group San Francisco, Peninsula, financial arrangements open to discussion (2) to head department with well established group not far from San Francisco, then partnership; UROLOGIST, for association, Northern California, partnership potential; GENERAL PRACTITIONERS, (1) association with two well established physicians East Bay, salary, early partnership; (2) group association, starting salary \$800; MANY EXCELLENT OPPORTUNITIES THROUGHOUT CALIFORNIA, salaries ranging to \$1,000 to start, or percentage basis and partnerships. For further information on these and many other openings, please contact Norma S. Rohl, Director, THE MEDICAL CENTER AGENCY, 26 O'Farrell St., San Francisco, YUkon 2-3412.

PEDIATRICIAN, SURGEON, GENERAL PRACTITIONER for medical group, southwest Los Angeles, Box 20,060, California Medicine.

PHYSICIANS-SURGEONS WANTED. Write us for forms if interested in locating in Pacific Northwest, Southwest, or through the Rocky Mountain area. No registration fee; strictly confidential. CONTINENTAL MEDICAL BUREAU (Helen Buchan), 510 West Sixth Street, Los Angeles 14, California.

THREE TO SIX MONTHS' RENT FREE to competent, personable Pediatrician (preferably a woman) with California license, in offices of established woman Obstetrician-Gynecologist and Internist. Must be available soon, as much needed. Los Angeles area. Box 20,115, California Medicine.

WANTED—GENERAL PRACTITIONER interested in general surgery and obstetrics, to come in partnership with well established G.P. in Valley town. Box 20,110, California Medicine.

CALIFORNIA LICENSED PHYSICIAN-SURGEONS WANTED: GENERAL PRACTITIONERS (1) join Bay area 8-man group long established; prefer younger man willing to do all phases of general practice and assist in surgery. Financial arrangements discussed in direct contact, (2) take over practice grossing \$4,000 monthly, of doctor being called to Service; has own modern medical building, fully equipped; excellent hospital facilities. Incoming man may take on locum tenens for 2 year period, or remain on independent basis, or association upon doctor's return. Terms entirely open. . . . **MANY EXCELLENT OPPORTUNITIES IN GENERAL PRACTICE THROUGHOUT CALIFORNIA . . . INDUSTRIAL PHYSICIAN** for Medical Department of large company, physical examinations, minor surgery. Offers regular hours, 5 day week; approximately \$7,000 plus extra remuneration for industrial compensation cases; RADIOLOGIST, eligible to/or certified, to join two Diplomates in fairly large group, not far from San Francisco—choice location; financial arrangements open. SURGEON, young, to assist Chief Surgeon of group having own hospital, preference to one who has recently completed surgical residency. Salary to start \$750 per month. OPHTHALMOLOGIST (Southern California); preferably Diplomate for association Board man that specialty, with large private practice, excellent location. Guarantee plus percentage; partnership after first year. INTERNIST for 8-man group in town of 18,000 about two hours from San Francisco. Beginning salary \$750 up, with opportunity for partnership. ORTHOPEDIST, board eligible or certified, wanted by highly qualified group of specialists, mostly certified, attractive Southern California location; financial arrangements open.

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WANTED: Staff physician in approved tuberculosis hospital. Must be a citizen and eligible for California license. \$484.00 to \$595.00 per month. Single or family maintenance at nominal charge. Address: Superintendent, Arroyo Del Valle, Livermore, California.

WANTED: Resident physician in approved tuberculosis hospital. Must be a citizen and eligible for California license. One- or two-year residency. \$200.00, \$315.00 or \$375.00, depending on qualifications of applicant. Single or family maintenance at nominal charge. Address: Superintendent, Arroyo Del Valle, Livermore, California.

OPHTHALMOLOGIST WANTED. Northern California group. Located within easy driving distance of San Francisco, Sierras. Short salaried period, then partnership. Box 20,135, California Medicine.

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GENERAL PRACTITIONER, married with three children, 1948 graduate, to be released from army in July; two years successful practice prior to service; California license; desires position leading to partnership or membership in small group in area near San Francisco. Best references available; can appear for interview. Box 20,100, California Medicine.

INTERNIST—age 37, draft exempt, married, two children. Eligible Board of Internal Medicine, take examinations October 1953. Licensed in California. Will accept position only in California, institutional, private or group practice. Prefer southern or central California. Experiences, references, personal interview upon request. Box 20,080, California Medicine.

UROLOGIST—47 years old. Desires California location for private practice. California license. Well trained and capable in this field. Box 20,075, California Medicine.

WANTED—OPPORTUNITIES FOR FOLLOWING CALIFORNIA LICENTIATES: (a) PEDIATRICIAN; three years' training, children's hospital, unit, university group; discharge from Navy in May. (b) GENERAL SURGEON trained in thoracic surgery; Diplomate (general surgery); since 1944 chief of surgical service, unit, university group. (c) ORTHOPEDIC SURGEON, Diplomate; several years' group clinic association; considerable teaching experience. (d) INTERNIST; BA, BS, MB, MD, one of leading universities; year's medical internship, three years' training medicine, university hospital. (e) OBSTETRICIAN-GYNECOLOGIST; four years' general practice; three years' training, university center; year's preceptorship, prominent obstetrician-gynecologist. (f) UROLOGIST, Diplomate; three-year fellowship, urology; M.S. (Urology); six years, head department, 30-man group; well qualified, urologic surgery. (g) DERMATOLOGIST; Diplomate, trained at university center; seven years, group practice. (h) GENERAL SURGEON trained in plastic surgery; seven years' group practice. (i) OPHTHALMOLOGIST; four years' training in ophthalmology, teaching hospitals. For further information, please write Burneice Larson, Medical Bureau, Palmolive Building, Chicago.

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GENERAL PRACTITIONER—age 33. Three years in Air Force and Seven years total service. Married, four children. Desires association or salary at first. Discharge June 30. Broad experience in Air Force. Enjoy all phases of general practice. Prefer San Francisco or Los Angeles suburban areas. Box 20,140, California Medicine.

(Continued on Page 74)

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nant resulting from stimulation of the same mechanisms," according to the consultant.

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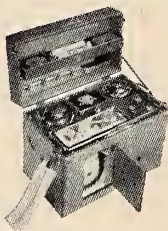
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(Continued from Page 66)

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Not Enough Body Fat as Dangerous As Too Much

Not enough body fat is dangerous—just as dangerous as too much.

Fatty tissue in proper amounts is an essential constituent of the human body. Dr. Max Millman, Springfield, Mass., wrote in a recent issue of *Today's Health*, published by the American Medical Association. It adds not only to the person's comfort and shapeliness, but also protects his health and nutrition to a significant degree.

Fat in normal amounts, approximately 10 to 15 per cent of the total body weight, serves a variety of useful purposes, he stated. It (1) acts as a reservoir for food to be used in time of need; (2) serves as padding or shock absorbing material, protecting the various organs against undue shock or vibration; (3) keeps the individual warm; (4) is responsible in large measure for the smoothness and elasticity of the skin, as well as for the normal shape and contour of the body, and (5) conserves protein in the body.

"People who lack an adequate amount of fat are undernourished if not emaciated, and are susceptible to all the hazards that go with this condition, such as weakness, anemia, loose skin, flabby muscles and a diminished resistance to disease, particularly tuberculosis," Dr. Millman pointed out.

Too much fatty tissue, on the other hand, inflicts a long list of harmful and damaging effects on the body, he said, adding:

"The hazards that obesity leads to lend themselves rather readily to a classification into what may be termed the five D's, namely: Disfigurement, discomfort, disability, disease and death."

Just as normal fat gives attractive contours to the body, too much of it causes disfigurement, according to Dr. Millman. The obese person is troubled with sluggishness, tiredness and lack of pep, and sometimes shortwindedness, palpitation, dizziness and pain in the weight-bearing joints.

The fat man lacks the efficiency of his fellow laborers, and is vulnerable to many more diseases, especially the so-called degenerative conditions, than his lean counterpart. The ultimate penalty of useless fat is premature death, Dr. Millman stressed, adding:

"Care must be taken to detect as early as possible even the mildest degrees of overweight. Similar care must be exercised in the evaluation of the lower limits of normal, otherwise the body may be deprived of some of its useful and indispensable fat.

"The mere desire to become thin is not sufficient reason for reducing. It should be emphasized that the state of undernutrition carries hazards that are frequently no smaller than those of obesity. And finally it should be stressed that weight correction warrants all the expert, professional care that modern science has to offer."

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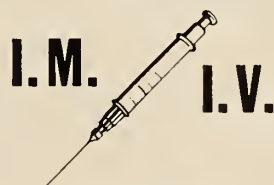
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Reports Successful Operation to Correct Acute Lymphedema

Successful surgical correction of advanced forms of lymphedema, a condition which previously has resisted most surgical efforts to resolve it, was described by Dr. Gerald H. Pratt, New York, in a recent issue of the *Journal of the American Medical Association*. Lymphedema, sometimes called elephantiasis, is an abnormal swelling of tissues due to inadequate drainage of lymph fluid.

Under the new procedure, the patient's afflicted limb is elevated for two weeks prior to surgery to improve drainage of fluid from it. In the operation,

all of the top layer of skin is removed from the limb in three-inch strips by means of an electrical device. The remainder of the skin, subcutaneous tissue, fat, lymph, and all other fibrous tissue is then removed from the limb, leaving the muscle exposed.

A pattern like that for a skin-tight pants leg is cut from cellophane, according to Dr. Pratt. The top layer of skin, which has been sewn together, is stretched and cut exactly to the pattern. The skin is then reapplied directly on the muscle and tacked with fine silk sutures. Pressure dressings are applied and not disturbed for two weeks.

(Continued on Page 81)

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Reports Successful Operation to Correct Acute Lymphedema

(Continued from Page 80)

During the first two-week postoperative period, he stated, movement is encouraged, but weight-bearing is not permitted. Pressure support is used when the patient walks, and is continued for four weeks.

The operation usually is performed in two stages—one for the thigh and another three weeks later for the calf and foot, Dr. Pratt said, adding:

"The results in 25 cases in which this operation has been done have been most promising. There have been no recurrences of lymphedema. The first operation was done more than three years ago.

"Efforts to correct the advanced type of lymphedema have been made throughout surgical history. Massive lymphedema has been one of the conditions that have resisted all surgical efforts to resolve them. Patients with massive lymphedema are physically and psychologically so handicapped as to arouse anyone's compassion. They become recluses, and some have sought amputation. Suicides have resulted.

"The purpose of this paper is to report on a recently standardized technique, which I believe, if not the final step, is one in the right direction."

Dr. Pratt pointed out, however, that in mild and early cases of lymphedema, elevation of the limb

(Continued on Page 90)

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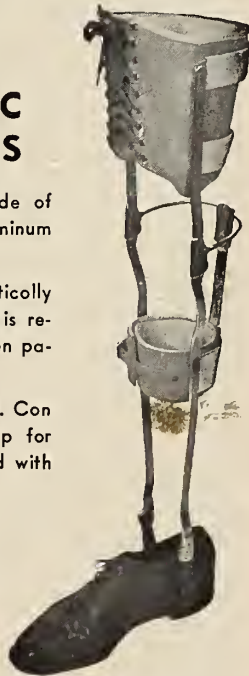
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Report TB Drug May Aid in Therapy Of Some Skin Diseases

Isonicotinic acid hydrazide, a drug which has proved to be a useful adjunct in the treatment of lung tuberculosis, may hold great promise in the treatment of lupus vulgaris and other tuberculous conditions of the skin, it was reported in a recent issue of the *Journal of the American Medical Association*.

Lupus vulgaris is a relatively rare skin disorder which is very difficult to treat. It usually begins on the face, and consists of large, thick, brown, red-yellow blemishes which scale and cause scarring.

Two cases of lupus vulgaris treated with isonicotinic acid hydrazide were reported by Drs. Lawrence C. Goldberg and Claudia R. Simon, Cincinnati. Both are associated with the department of dermatology, College of Medicine, University of Cincinnati.

Both patients, in whom the disease was present for more than 30 years and who failed to respond to various other forms of therapy, responded rapidly to the drug, the doctors stated, adding:

"The clinical improvement was more dramatically matched by the histopathological examination, which was done five months after the initial use of the drug."

In one patient, a 56-year-old woman, it was almost impossible to make a clinical diagnosis of the disease after three and one-half months of isonicotinic acid hydrazide therapy, according to the doctors. In the second patient, a 37-year-old woman, all signs of activity of the disease completely disappeared and only scarring remained following several months of such treatment.

No untoward reactions were seen as a result of the use of the drug, the doctors reported.

However, they stressed that use of the drug to treat such disease is still in the experimental stages, and patients receiving such treatment should be thoroughly investigated by laboratory methods prior to and during the institution of the drug.

"We cannot state just how long isonicotinic acid hydrazide therapy should be continued, but we believe that the therapy should be given for a long period of time, possibly in smaller dosages, even after clinical and histopathological improvement has been demonstrated," the doctors pointed out.

"We also do not know whether there will be any recurrences when isonicotinic acid hydrazide therapy is stopped. Only future observations will determine the answer to these questions."

CORRECTION

On Page 38 of the Advertising Section of *CALIFORNIA MEDICINE* for March, in the article "New Hormone Ointment Aids in Treatment of Skin Disorders," psoriasis was erroneously included among the skin diseases successfully treated with hydrocortisone acetate ointment.

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(1) Kuzell, W. C., and Schaffarzick, R. W.: California Med. 77:319, 1952. (2) Stephens, C. A. L., Jr., and others: J.A.M.A. 150:1084 (Nov. 15) 1952. (3) Steinbrocker, O., and others: J.A.M.A. 150:1087 (Nov. 15) 1952.



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Reports Successful Operation to Correct Acute Lymphedema

(Continued from Page 81)

and good support, if continued long enough, can prevent massive collections of fluid, thereby preventing the necessity of surgical correction. Pressure bandages should be employed, and the limb elevated each night and whenever the bandage feels tight during the day. The support must be worn until no swelling occurs when it is removed.

He added that the new operative technique lends itself to correction of such other problems as disabling, multiple superficial tumors, dead tissue re-

sulting from burns, extensive post-thrombotic swelling and war injuries.

Dr. Pratt is associated with the cardiovascular surgical clinic, St. Vincent's Hospital, and the New York University College of Medicine.

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New Influenza Vaccine Offers Promise Of Better Immunization

A new type of influenza vaccine that will at least double the period of immunity and may make it possible to offer protection against more strains of influenza virus was reported in a recent issue of the *Journal of the American Medical Association*.

Preliminary studies have shown that the vaccine, emulsified in light mineral oil, gives immunity for at least two years, compared to the one year immunity afforded by presently used vaccines which are prepared in a water base, according to Dr. Jonas E. Salk, Pittsburgh. Dr. Salk is associated with the virus research laboratory, department of bacteriology, University of Pittsburgh School of Medicine.

"It appears that emulsification with light mineral oil may provide, in part at least, the means for resolving the problems of prolonging vaccine effectiveness and increasing the immunologic coverage to include a sufficient number of strains to cover the entire spectrum for each virus type," Dr. Salk wrote.

He pointed out that immunization resulting from influenza vaccine prepared in a water base reaches its peak sometime before the sixth week after inoculation. The decline begins thereafter and continues up to one year, when immunity returns almost to pre-vaccination level. In emulsified light mineral oil vaccine, however, the maximum effect of immunity is evident four months after inoculation. It slightly declines in the course of the subsequent interval up to one year, with little change appearing during the second year.

The degree of immunity has been shown to be greater in those persons inoculated with the oil base vaccine than in those with the aqueous preparations, Dr. Salk said, adding:

"It is clear that both preparations, in the dosages employed, tend to induce the formation of about the same amount of antibody within the first two weeks after inoculation, but that the level continues to rise thereafter in the group given the emulsified vaccine.

"Thus, the aqueous material provided no advantage over the emulsified preparation in regard to more rapid appearance of antibody, but the aqueous preparation seems to be antigenically active for a shorter period for reasons that have to do with the difference in the way each induces antibody formation.

"The difference is due not merely to the retention of antigen for longer periods at the depot site, but rather to the accumulation around the inoculum of cells important in antibody formation. The light mineral oil and possibly, to some extent, the ingredients of the emulsifying agent attract these particular cells. It seems most probable that this effect is due to the oil and its chemical and physical characteristics."

In the emulsified vaccine, much smaller quantities

(Continued on Page 16)

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New Influenza Vaccine Offers Promise Of Better Immunization

(Continued from Page 10)

of virus are required than had been employed previously in the aqueous vaccine, according to Dr. Salk. In addition, many more strains of virus may be incorporated in the emulsified vaccine.

"It is now well established that influenza virus vaccines must induce adequate levels of antibody for all strains if the vaccines are to be effective in the practical prevention of disease," he added.

No toxic effects, allergies or reactions were seen following use of the new vaccine. Dr. Salk pointed out.

At present the new vaccine is not available for general application. Further studies with the vaccine are necessary, he stated.

The experience with influenza virus vaccines emulsified in light mineral oil was an important factor in facilitating the extension in human subjects of studies with experimental poliomyelitis vaccines, Dr. Salk reported.

Dr. Salk prepared the article in collaboration with Mary Contakos, A.B., Angela M. Laurent, M.S., and Maria Sorensen, M.D., Pittsburgh; and Lieut. Col. Adam J. Rapalski, Lieut. Col. I. H. Simmons, and Lieut. H. Sandberg, (MC), U. S. Army, Fort Dix, New Jersey.



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**Name A.M.A. Delegates to
World Medical Meetings**

A.M.A. representatives to two important world medical meetings—the World Medical Association and the First World Conference on Medical Education—have been announced by the Board of Trustees.

Delegates, alternates and observers to the World Medical Association meeting to be held August 31-September 4, 1953, at The Hague, the Netherlands, include: Drs. Gunnar Gundersen, E. S. Hamilton, Dwight H. Murray, F. J. L. Blasingame, George F. Lull and Austin Smith.

The following representatives will attend the First World Conference on Medical Education August 24-

29, 1953, in London: Drs. Donald G. Anderson, Herman Weiskotten, Victor Johnson, E. S. Hamilton and Austin Smith.

Ralph P. Creer, secretary of the Committee on Medical Motion Pictures, has been invited to speak on "Motion Pictures in Medical Education" at the London conference. His paper will include a discussion of the value of motion pictures in medical teaching and the international exchange of medical films.

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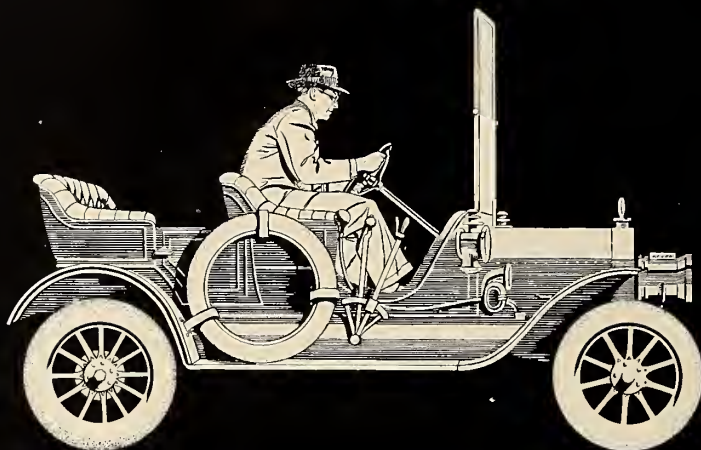
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These unposed photographs of patient C.P. were snapped during an actual interview with her physician. See the opposite page for the case history of this patient.



Warns of Possible Dangers from Misuse of Barbiturates

Excessive or improper use of barbiturates is becoming a serious problem. Like alcohol, marijuana, heroin, morphine and other drugs, barbiturates are now being used by unstable individuals as a means of escaping from the responsibilities of the world, in the opinion of Dr. Donald A. Dukelow, Chicago.

"This problem centers on a drug that is very valuable to medicine," Dr. Dukelow wrote in a recent issue of *Today's Health*, published by the American Medical Association. "When used properly under the supervision of physicians, the barbiturates are among the more valuable of the sedative and hypnotic drugs. They prevent much suffering."

However, he stressed, barbiturates carry a serious threat of death when used improperly or excessively. Most drugs which are habit forming or addicting ultimately may destroy the victim's personality, cost him his friends, drive him to crime, and even lead to death.

Misuse of barbiturates, which exert a depressant effect on the central nervous system, is known to cause at least a thousand deaths a year and to be a contributing cause in unknown thousands of other deaths through accidents and crime.

In 1951, 688,500 pounds of barbiturates were produced. It is estimated that more than half of it is distributed through illegitimate channels for non-medical purposes.

The drug is sold through such illicit channels as dope dealers, as a sideline at bars, over the counter by some unscrupulous druggists, and distributed through mail order drug houses that are not particular who buys their products, he reported.

Younger people may use barbiturates as an experiment when they are looking for a new thrill. In older people, excessive use of the drug may begin as a means of escaping from the realities of life after they have found a few hours of forgetfulness in a barbiturate prescribed by their physician.

The individual who takes excessive quantities of barbiturates, like the alcoholic, becomes intoxicated, Dr. Dukelow pointed out. His behavior is unpredictable, and he is extremely dangerous to himself and others. He must be restricted.

There is a greater threat of death in trying to cure true barbiturate addiction than in curing morphine addiction, Dr. Dukelow stated. Withdrawal causes great discomfort. When the drug is withdrawn, the individual often becomes so excited and disturbed that he is likely to suffer convulsions or have a serious accident.

Control of excessive and improper use of barbiturates and the deaths due to them depends on

(Continued on Page 28)

Promising Treatment of Amebic Dysentery Reported

Promising results in the treatment of amebic dysentery were reported in two articles in a recent issue of the *Journal of the American Medical Association*.

One study, involving 538 patients in a Korean military hospital, disclosed that acute amebic dysentery responded best to therapy consisting of terramycin given alone or in combination with such standard amebicides as emetine, carbarsone, chiniofon, chloroquine, or bismuth glycolylarsanilate and chloroquine. This report also said that the disease gave excellent initial response and low relapse rate to treatment with the combination of aureomycin and chloroquine diphosphate.

The second article was based on a study of 264 persons in Venezuela suffering from various forms of amebic dysentery. Best results in this study were obtained by use of the combination of bismuth glycolylarsanilate and chloroquine. Chloroquine is a drug which has proved beneficial in the treatment of malaria.

In the Korean study, patients were supervised for at least six weeks. Various forms of treatment were instituted, including the administration of known amebicides and antibiotics, alone and in combinations.

Combinations of standard amebicides proved to be much more effective than use of a single amebicide, the article pointed out. Terramycin proved to be the most effective of the antibiotics, and, given in combination with standard amebicides, gave the best results.

According to the authors of the Korean report, "additional studies of the more promising treatment schedules are advisable." The authors are Lieut. Gerald A. Martin (MC), U. S. Navy (deceased); 1st Lieut. Bernard T. Garfinkel (MC), U. S. Army Res.; Marion M. Brooke, Sc.D., Atlanta, Ga.; Paul P. Weinstein, Sc.D., Bethesda, Md., and William W. Frye, Ph.D., M.D., New Orleans.

In the Venezuelan study, prepared by Dr. Julio Sanchez Vegas, Caracas, Venezuela, patients were observed for periods ranging from six to 24 months. These patients also were given standard amebicides and antibiotics, both alone and in combinations.

According to Dr. Vegas, amebiasis should be considered a systemic disease rather than a purely intestinal or extraintestinal infection. Therapy for amebic dysentery should consist of administration of preparations which will destroy the parasite not only in the intestines, but also in other parts of the body before manifestation of additional infection, he stated, adding:

"The combination of the nonabsorbable arsenical, bismuth glycolylarsanilate, with the highly absorbable chloroquine is a logical and effective treatment

(Continued on Page 28)



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Warns of Possible Dangers from Misuse of Barbiturates

(Continued from Page 24)

many things, according to Dr. Dukelow. The public must be warned of the drug's dangers so that people will take barbiturates only on prescription. Because the drug can disturb one's judgment, taking of the pills should be supervised by someone other than the patient. Only a few such capsules should be prescribed at one time by a physician, and the prescription should be marked not refillable.

Dr. Dukelow is medical consultant in health and fitness to the A.M.A.'s Bureau of Health Education.

Promising Treatment of Amebic Dysentery Reported

(Continued from Page 24)

for amebiasis, which should be considered as a systemic and not a purely intestinal disease."

Dr. Vegas pointed out that climatic conditions of Caracas, Venezuela, are similar to those of many southern cities in the United States. In the middle and upper income groups of Caracas, it has been shown that 8.9 per cent of the population has some form of amebiasis, he said. Over a period of five years, approximately one out of every three of his office patients carried the amebic parasite.

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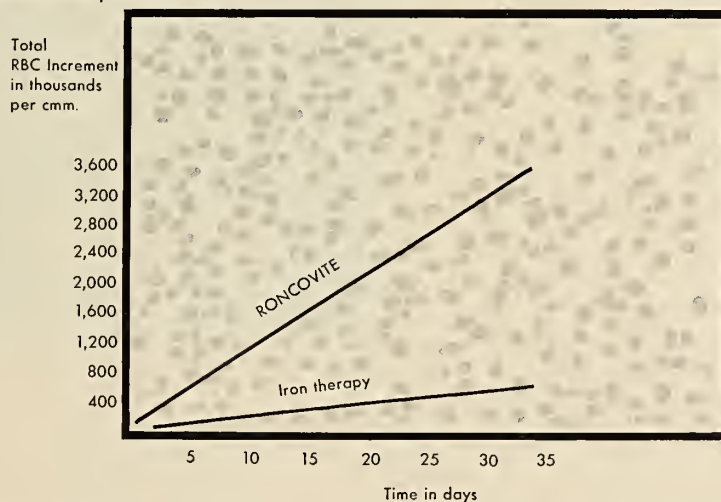
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1. Wolff, H.: Med. Monatsschr. 5:239 (1951); (2) Rohn, R.J., and Bond, W.H.: to be published; (3) Berk, W., et al: New England J.M. 240:754 (May) 1949; (4) Robinson, J.C., et al: New England J.M. 240:749 (May) 1949; (5) Weissbecker, W., and Maurer, R.: Klin. Woch. 24:855 (1947); (6) Wolff, H., and Barthel, S.: Munch. M. Wschr. 93:467 (1951); (7) Gardner, F.H.: J. Lab. & Clin. M. 41:56 (Jan.) 1953.

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The possibility of sensitivity to compound G-4 ("dichlorophene"), a preparation used as an antiseptic and deodorant, was reported in a recent issue of the *Journal of the American Medical Association*.

Compound G-4 has been advocated for use in dentifrices, antiperspirant creams, deodorant creams, powders, toilet waters and preparations for combating athlete's foot, according to Drs. A. A. Fisher, Woodside, N. Y., and Louis Tobin, Mount Vernon, N. Y.

"Within a period of six months, we have studied nine patients who were sensitive to compound G-4 contained in a popular ammoniated tooth paste," they stated. "All the patients showed a positive reaction on patch testing with five per cent compound G-4 in petrolatum."

Symptoms of sensitivity resembled those of a vitamin B deficiency, the doctors pointed out. Such symptoms as inflammation of the mouth, tongue and/or lips, cracking of corners of the mouth, and/or inflammation of the skin around the mouth were present.

(Continued on Page 33)



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Describe Sensitivity to Antiseptic And Deodorant Drug

(Continued from Page 32)

However, the doctors added, those patients who showed allergic hypersensitivity to compound G-4 were able to use ammoniated tooth paste that did not contain the preparation.

The doctors are associated with the department of dermatology and syphilology of the New York University Post Graduate Medical School, and the skin and cancer unit of the University Hospital.

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The presidential inaugural address of Dr. Edward J. McCormick will be broadcast nationwide on Tuesday evening, June 2. The program will originate from the Commodore Hotel, New York, during the A.M.A.'s 102nd annual meeting. Immediately following the ceremony, a reception honoring the new president will be held in an adjoining ballroom.

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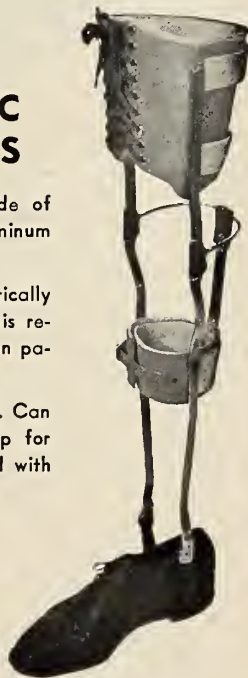
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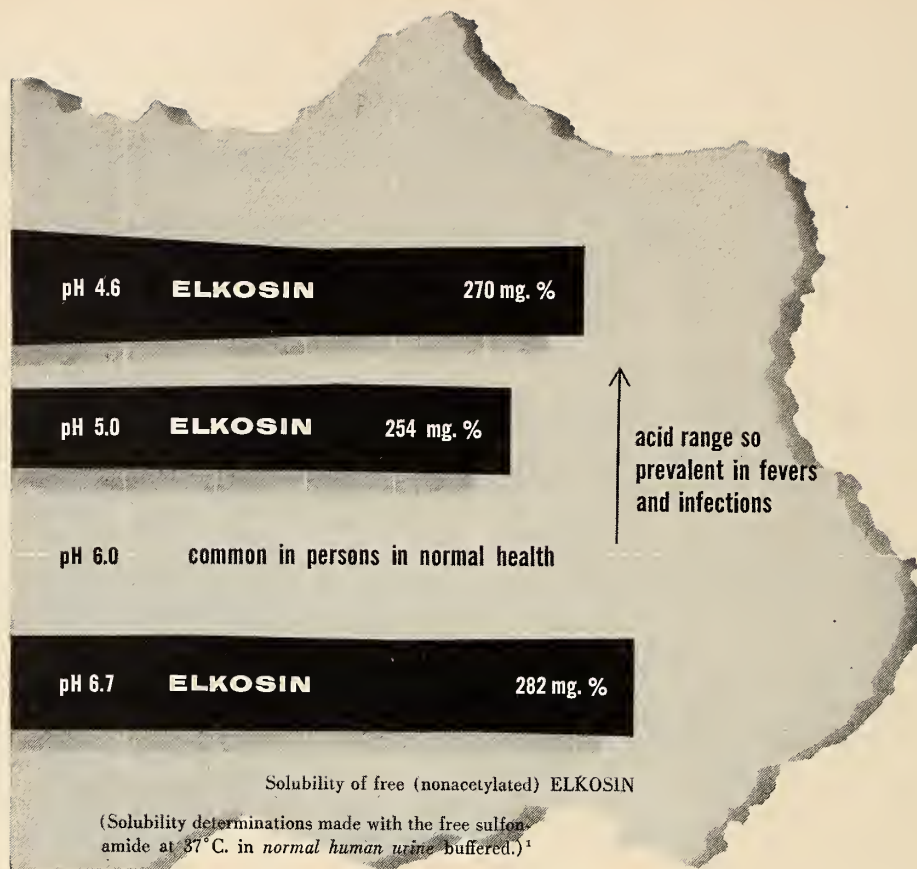
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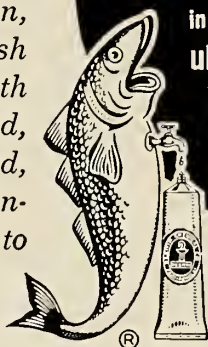
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1. Behrman, H. T., Combes, F. C., Bobroff, A., Leviticus, R.: Ind. Med. & Surg. 18:512, 1949.
2. Turell, R.: New York St. J. M. 50:2282, 1950.
3. Heimer, C. B., Grayzel, H. G., and Kramer, B.: Archives Pediat. 68:382, 1951.

Emotion Can Cause Loss of Movement

"This hurts me more than it does you" is more than an ancient saw.

It is sometimes the basis for a condition known as cataplexy—a temporary weakness or paralysis of voluntary movement induced by emotion. This weakness or paralysis is the result of inhibiting impulses sent to the muscles by the brain.

Aggression or a hostile impulse associated with guilt, shame or fear may result in cataplexy, Dr. Max Levin, New York, wrote in a recent issue of the *Archives of Neurology and Psychiatry*, published by the American Medical Association.

"When a man is about to give vent to aggressions for which he feels guilty, and which he therefore strives, consciously or unconsciously, to suppress, he may respond with cataplexy," Dr. Levin stated. "However, clinical evidence tends to show that when aggression is justified, and hence does not arouse guilt, cataplexy does not occur."

Aggression causing cataplexy may be real and overt, such as that of a man raising his hand against an animal or a child and being unable to strike him. It may be real but only implicit, as when a person merely has a hostile wish or thought, he added.

Play and sport permit the release, in a harmless and acceptable manner, of aggressive impulses that might otherwise prove a burden, Dr. Levin pointed out. Innocent fun and sport may serve as the vehicle for the acting out of aggressions which, depending on unconscious feelings and attitudes, may be associated with guilt.

However, aggressive impulses in sport and play can cause cataplexy, Dr. Levin stated, adding:

"Hunting and fishing provide many examples of cataplexy. A man may succumb when he raises his rifle at game or is about to haul in a fish."

The reason for this is symbolic, he said. Such sports give vent to the guilt feeling of killing, even though it is permissible under such circumstances.

Cataplexy has appeared in other sports, Dr. Levin stated. He described the case of a boxer who was unable to land the knockout blow because he "didn't have the heart" to hurt his opponent. Cataplexy also has been observed in tennis, baseball and snowballing.

"When cataplexy occurs in such games as chess, cards and billiards, in most, if not in all, cases, it is when the patient is making a winning play, and not when he is losing," according to Dr. Levin. "Psychoanalysis has shown that some people confuse aggressiveness and competitiveness with hostility. They feel guilty when they beat a competitor, even in sport, for victory gratifies their unconscious hostile wishes.

"When they lose a game, they may not like it, but they do not feel guilty. Indeed, losing may assuage their guilt. A winning play, however, fires the hostile impulse and sets the stage for conditioned inhibition and cataplexy."

New Doctor-Draft Bill Planned

The A.M.A. Council on National Emergency Medical Service has just completed an analysis of the doctor-draft bill, prepared by the Department of Defense to extend the "Doctor-Draft Law" beyond its current expiration date of July 1, 1953. The council's analysis indicates that the proposed bill would:

1. Extend the "Doctor-Draft Law" to July 1, 1955.
2. Set up two priority groups—(a) non-veterans and (b) veterans; also retain liability of those physicians now registered and classified in priorities 1 and 2.
3. Group 1 to go by age—youngest first. Group 2 to go by service—those with shortest service first. Present priority 1 and 2 men to go as their deferments expire.
4. Retain maximum induction age of 51.
5. Retain 24 months as required period of service.
6. Provide for deferments to maintain national health, safety and interest.
7. Define military service to include enlisted and commissioned service since September 16, 1940, except: (a) Army Specialized Training Program, V-12 or Army Air Force College; (b) internship and residency training or senior student programs.
8. Excuse from registration liability any physician who is a member of a reserve component.
9. Recognize service during World War II with countries which were allies of the United States.
10. Exclude from any liability under the Act registrants or reservists who had 12 or more months of service since June 25, 1950.
11. Permit the commissioning of aliens.
12. Authorize the continuation of the national, state and local advisory committees to the Selective Service System; give them added authority with respect to residents and faculty members.
13. Extend until July 1, 1955, authority of the Secretary of Defense to transfer reservists between the Armed Services.
14. Terminate reserve commissions automatically upon completion of stipulated active duty. This provision would be retroactive to September 9, 1950.
15. Authorize recall of reservists at rank "commensurate with professional education, experience or ability." Current limitation on number of higher grades would be waived for physicians.
16. Withhold \$100 extra pay per month from those registrants "inducted" even though later commissioned.

(Continued in Back Advertising Section, Page 51)

California M E D I C I N E

OFFICIAL JOURNAL OF THE CALIFORNIA MEDICAL ASSOCIATION

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Volume 78

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MAY 1953

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Number 5

Antibiotics and Chemotherapy

SELMAN A. WAKSMAN, Ph.D., *New Brunswick, N. J.*

IN THE HISTORY of man's struggle against infectious diseases and epidemics, certain great discoveries stand out. By far the most important of these was the recognition of the fact that bacteria, protozoa, viruses, and other microscopic forms of life are the agents responsible for causing infectious diseases.

The ancients designated as pests, plagues, or pestilences those diseases which were epidemic in nature. They frequently ascribed such epidemics to the wrath of the gods. A study of the Bible convinces one of the early remarkable understanding of the infectious nature of diseases, methods of prevention, and even of treatment. Deuteronomy alone abounds in such illustrations. In Chapter XXIII, this passage: "And a place shalt thou have without the camp, whither thou shalt go forth abroad; And a spade shalt thou have with thy weapons; and it shall be, when thou sittest abroad, that thou shalt dig therewith, and shalt afterward cover that which cometh from thee." In Chapter XXIV: "Take heed of the plague of leprosy, to observe diligently, and to do according to all that the priests, the Levites, may instruct you; as I have commanded them, so shall ye observe to do." And in Chapter XXVIII: "The Lord will cause the pestilence to cleave unto thee, until it have consumed thee from off the land, whither thou goest to possess it. The Lord will smite thee with consumption, and with fever, and with inflammation, and with extreme burning."

From the Institute of Microbiology, Rutgers University.

Delivered as the annual Reginald Knight Smith Lecture, at Mount Zion Hospital, January 16, 1953.

A Paper of the Journal Series, New Jersey Agricultural Experiment Station, Rutgers University, the State University of New Jersey, Department of Microbiology.

Gradually it became recognized that such diseases are caused by living organisms, which are transmitted directly or indirectly from the diseased to the healthy. The final recognition of the microbial origin of disease came during the latter part of last century.

Louis Pasteur stands out as the central figure in establishing the fact that bacteria and different other microbes are largely responsible for the causation of infectious diseases. Although he himself did not isolate many of the infectious agents, he established the significance of infection, immunization, and vaccine therapy, the three broad principles that dominated the recognition of nature and treatment of infectious diseases before the recent advent of chemotherapy. He contributed, incidentally, in large measure, to the domestication of microbial forms of life. Pasteur's work led to a tremendous upsurge of efforts to correlate the occurrence and distribution of bacteria and other microorganisms with the causation of specific diseases. Experimental procedures were devised for studying the nature of the disease-producing agents and for the preparation of various biological and chemical agents for the control of infectious diseases.

Robert Koch is the other great pioneer in the field of discovery of causation of disease and methods of treatment. His study of the life cycles of bacteria and his methods for the isolation, cultivation, and staining of bacterial agents served further to advance the science of microbiology and led him to the discovery, in 1882, of the tubercle bacillus, and thus to establishment of the infectious nature of tuberculosis. Although his other great discovery, tuberculin,

which he thought would serve as the therapeutic agent for combating this infectious disease did not justify his expectation and proved to be the first failure among the many "cures" for the treatment of tuberculosis which were to follow, he established, nevertheless, an important principle of infection which came to be known as the "Koch effect."

Following these two groups of discoveries, a host of investigators, including bacteriologists, protozoologists, mycologists, and virologists, isolated organisms that cause numerous infectious diseases that afflict man and his domesticated plants and animals, established the mode of transmissions of such diseases, and discovered means of prophylaxis and therapy.

It was the search for chemical substances or drugs which could be used in the treatment of infectious diseases that led to another great discovery in the field. Paul Ehrlich, noted for his contribution to immunology, is credited with being the "father of chemotherapy." He not only established the great potentialities of certain dyes and arsenical agents in combating a variety of diseases, such as syphilis, but he pointed to the great potentialities of synthetic chemistry in opening a way for the final control of human diseases. The work of Ehrlich was opposed by a few, but it was readily accepted by chemists and microbiologists, and served to arouse the medical world to the belief that before very long new drugs would be found that would act in a similar manner upon bacterial and other diseases.

Although bitter disappointment soon followed, Ehrlich's prophesy was fulfilled a quarter of a century later with the discovery of the sulfa drugs. The introduction of these compounds ushered in a new era in chemotherapy. It was now established beyond question that not only protozoan and spirochetal diseases, which were successfully treated with arsenical compounds, but bacterial infections as well could be effectively combated by generalized treatment with chemical drugs. Thus the basis was laid for bacterial chemotherapy.

In rapid succession, one drug followed another. Each proved to have certain advantages over the previous ones. New types of compounds were soon added, like the sulfones, which were believed to be able to do for tuberculosis what the others did for most of the bacterial infections.

But there appeared to be a certain limit beyond which these compounds could not reach. There still remained a great many diseases which did not respond to the sulfa drugs, including many caused by Gram-positive and Gram-negative bacteria; the various forms of tuberculosis did not respond well to the sulfones; the virus diseases were not affected at all. Furthermore, these compounds were found to

produce frequent toxic reactions and gave rise, under certain conditions, to drug-resistant strains of bacteria.

Fortunately, even before the limitations of the synthetic compounds were fully recognized, a dramatic advance was made in chemotherapy through the microbiological research that led to the discovery of antibiotics. Several major groups of microorganisms, comprising certain bacteria, molds or fungi, and actinomycetes, were found capable of producing various metabolic products which had the capacity of inhibiting the growth of and even of destroying disease-producing bacteria, not only in the test tube but also in the human and animal body. This fundamental principle was first recognized in 1939-1940. It brought about at once a change in the whole problem of chemotherapy. Medical science was revolutionized. Diseases never before believed to be susceptible to therapy were treated with remarkable effectiveness. Old drugs were replaced by new ones, which were more effective and less toxic. Even such apparently resistant diseases as brucellosis and tuberculosis became subject to therapy. One of the most important chapters in the history of science and medicine was written before our eyes.

The discovery of antibiotics served to encourage, rather than discourage, chemical synthesis. New compounds are being tested daily. I need hardly dwell upon some of the substances developed during the war for the treatment of malaria and various animal parasites. The discovery of the effectiveness of isonicotinic acid in the treatment of tuberculosis serves as further evidence of the great potentialities in this field and of the great future for chemotherapy.

The continued search for new antibiotics and the chemical synthesis of new compounds are now proceeding hand in hand, toward the ever-expanding battle against infectious diseases and toward the final triumph of the human mind.

Since the early days of microbiology, the phenomenon known as antagonism or antibiosis has been observed by the student of mixed populations, in soil or in water basins, in mixed infections, and even by the casual observer of contaminated plate cultures of microorganisms. Although the ability of various bacteria and fungi to produce antimicrobial substance has thus long been appreciated, recognition of the great chemotherapeutic potentialities of these substances, now designated as "antibiotics," is of very recent origin. Hardly a dozen years ago, these substances were spoken of as lysins, toxins, bacteriolysins, bacteriotoxins, bacteriostatic, bactericidal and bacteriolytic substances, antibacterial or antagonistic agents, lethal and staling principles, and by a variety of other designations.

It is sufficient to cite in this connection the concepts of Dubos in 1939, who has made a highly im-

portant contribution to the development of this subject. Having succeeded in isolating from the soil an organism which could decompose soluble polysaccharides extracted from certain bacterial pathogens, he proceeded to develop methods for the isolation of microorganisms capable of attacking not only specific cell components, but also the intact living cell itself. This work resulted in the isolation, in 1939, of a bacterial culture which produced a soluble agent that had the capacity to attack and cause lysis of living cells of susceptible Gram-positive bacteria. He spoke of it as "a bactericidal agent extracted from a soil bacillus."

These concepts illustrate the prevailing attitude toward the phenomenon of antagonisms and the production of antibiotics. With certain few exceptions, the chemotherapeutic significance of these compounds was hardly appreciated. Practical applications were thought to be limited. They were looked upon largely as microbiological curiosities.

The mechanisms responsible for the antagonistic properties of microorganisms were not sufficiently understood. Numerous theories were proposed to explain the reactions involved. They included competition for nutrients, competition for space, exhaustion of certain elements in media, physicochemical effects, and production of specific growth-inhibiting substances. There was a special appeal in the concept of "struggle for existence," which was hardly justified on closer examination.

This confusion contributed to a lack of recognition of the potential value of the antibiotic substance in human and animal therapy. When Alexander Fleming described penicillin in 1929, he thought in terms of obtaining cultures of Gram-negative bacteria free from Gram-positive forms. Although he fully appreciated the great therapeutic potentialities of this type of substance, no further investigation of this problem followed for nearly a decade. It was for this reason that neither Raistrick, who attempted to isolate penicillin in 1932, nor Reid, who tried to repeat Fleming's experiments in 1935 in this country, was successful in unravelling this problem.

This was true also of the various investigations of the antibacterial substances produced by different bacteria. It is sufficient to list the numerous studies on pyocyanase, produced by *Pseudomonas aeruginosa*, and the products of *Bacillus subtilis*, *B. mycoides*, and other spore-forming bacteria. Even less can be said of the substances produced by actinomycetes, of which only two enzyme-like preparations were recognized before 1940, in spite of the fact that many of these organisms were known to exert a pronounced growth-inhibiting effect upon various bacteria and fungi. As late as 1938, none of the substances of microbial origin, with the possible excep-

tion of pyocyanase, received any consideration as agents with therapeutic potentialities heralding a new era in medicine.

Our modern knowledge of the production and utilization of antibiotics dates back only to the last 13 or 14 years. The isolation of the tyrothricin complex from a spore-forming soil bacterium in 1939, soon followed by the re-isolation of penicillin from fungi in 1941, and by the isolation of actinomycin in 1940 and of streptothricin in 1942 from cultures of actinomycetes, pointed to the great potentialities of microorganisms as producers of antibiotics.

These contributions opened a new chapter in microbiology and especially in human and animal therapy. In this brief span of time, large numbers of well-defined chemical substances now designated as antibiotics have been isolated and tested for their antimicrobial properties. The actinomycetes alone have yielded nearly 100 compounds or preparations. Hundreds of thousands of cultures were isolated from soils, water basins, composts, and other natural substrates. They were examined for their ability to inhibit the growth of pathogenic and saprophytic bacteria, fungi, viruses, protozoa, and insects. Many have been studied further for their capacity to produce antibiotics. Numerous books have been written on the subject. Special journals in various countries and in different languages are devoted to it. Penicillin, streptomycin, bacitracin, chloramphenicol, polymyxin, aureomycin, terramycin, neomycin, and erythromycin have taken an important place in the treatment of numerous infectious diseases caused largely by bacteria, spirochetes, rickettsiae, and some of the larger viruses. Several other compounds are known to be promising therapeutic agents.

Antibiotics are produced by microorganisms and are not to be confused with plant products, such as quinine, and with certain animal products, such as lysozyme, that may possess similar properties. Neither are they to be confused with various organic acids and alcohols that are produced by microorganisms and that are active only in high concentrations.

The formation of antibiotics is limited to certain species and frequently to certain strains of organisms. On the one hand, penicillin is produced by a number of strains of a great variety of fungi belonging largely to the genera *Penicillium* and *Aspergillus*. Streptomycin is produced only by certain strains of *Streptomyces griseus* and of certain other species of *Streptomyces*. Some of these are able to form chemical modifications of this antibiotic, as in the case of hydroxystreptomycin produced by *S. griseocarneus*, or they may give rise to quantitatively different mixtures of the antibiotics, as streptomycin vs. mannosido-streptomycin. Other strains of *S. gri-*

seus may form other antibiotics, such as streptocin and candicidin.

By proper strain selection and by changing the composition of the medium it is possible to increase greatly the yield of the antibiotic and frequently to induce certain chemical variations in its molecular structure as in the case of the different penicillins.

In searching for new antibiotics, it is advisable to consider certain fundamental principles which they should possess before they can qualify as suitable chemotherapeutic agents:

1. They should be selective in their action against bacteria and other microorganisms, and not act as general antiseptics or disinfectants.

2. They should be effective against those microorganisms that are not now subject to the action of antibiotics, or they should be more effective or less toxic than the agents already known.

3. They should exert their antimicrobial activity in the presence of body fluids, and should not be inhibited by substances present in the blood or be destroyed by tissue enzymes.

4. They should be well tolerated when injected into animals in amounts required for combating infections.

5. In concentrations necessary to affect the infectious agent, they should not damage the leukocytes in the blood or be injurious to body tissues.

6. They should be excreted readily, but not too rapidly, from the animal body, and should not accumulate to produce undesirable after-effects.

7. They should not favor the rapid development of resistance among sensitive organisms.

The potential synergistic properties of a new antibiotic with another antibiotic or with a synthetic compound must not be overlooked, even though the new agent may not in itself play an important role in chemotherapy.

The various antibiotics so far isolated and recognized can be classified on the basis of their chemical composition, their antimicrobial spectra, their toxicity to animals, or their chemotherapeutic potentialities.

Chemically, antibiotics range from fairly simple to highly complex compounds. Some contain only carbon, hydrogen, and oxygen. Others are more complex and contain nitrogen (streptomycin— $C_{21}H_{37}O_{12}N_7$), or nitrogen and sulfur (penicillin— $C_9H_{11}O_4SN_2R$), or nitrogen and chlorine (chloramphenicol— $C_{11}H_{12}O_5N_2Cl_2$). Some are polypeptides (gramicidin, subtilin, and bacitracin), proteins (colicins), or benzene ring compounds. Only very few antibiotics have so far been synthesized, notably penicillin, clavacin, and chloramphenicol; of these, only chloramphenicol has found practical applica-

tion in therapy. Some of the antibiotics represent single chemical entities, whereas others are made up of several closely related compounds. The latter is true for the penicillins, the streptothricins, the streptomycins, and the aureomycin-terramycin complex. The individual antibiotic entities may vary in their antimicrobial spectra, in toxicity to animals, in stability, and in activity *in vivo*.

Antibiotics also vary greatly in their antimicrobial spectra. Some are active upon a great variety of bacteria, and even upon fungi, rickettsiae, and other groups of microorganisms. Others have very narrow spectra, and are active only upon certain groups of organisms, such as mycobacteria, yeast-like fungi, or certain viruses. Clavacin has a very wide spectrum; penicillin and streptomycin have narrower spectra. Chloramphenicol, aureomycin, terramycin, and erythromycin are active against various bacteria as well as against rickettsiae and some of the larger viruses. Viomycin, esperin, and nocardin are active only upon the mycobacteria; the polymyxins are active largely upon Gram-negative bacteria. Actidione, fradycin, fungicidin, antimycin, ascocin and candicidin are active only upon fungi, with considerable variation in their spectra.

Antibiotics also vary greatly in their toxicity to animals: penicillin is least toxic; actinomycin, streptocin, and xanthimycin are among the most toxic. Clinically, antibiotics vary from important chemotherapeutic agents that are used in the treatment of a great variety of infections, to certain compounds, like tyrothricin, bacitracin, and polymyxin, which have only limited applications.

The microorganisms which are capable of forming antibiotics frequently represent large and variable groups. This is true of the numerous members of the *Penicillium notatum*-*P. chrysogenum* group, which yield various penicillins; the *Streptomyces griseus* group, which produce the streptomycins; the *S. lavendulae* group, which form streptothricin and a variety of other substances; the *S. aureofaciens*-*S. rimosus* group, which produce aureomycin and terramycin; and the *B. subtilis* group, which is responsible for more than a dozen compounds possessing antimicrobial properties. There are certain pronounced differences between the various members of these groups of microorganisms. The numerous strains of *Penicillium* vary not only in their quantitative production of penicillin, but also in the nature of the particular type of penicillin.

The fungi have so far yielded one antibiotic that has found practical application, that is, penicillin. The bacteria, notably the spore-forming organisms, have contributed several important agents, mostly polypeptides, some of which, such as tyrothricin, bacitracin, and polymyxin, have found certain applications in therapy. The non-spore-forming bacte-

ria have contributed several antibiotics, of which pyocyanase formerly received much consideration. More recently nisin, a product by a micrococcus, showed at first much promise for the treatment of tuberculosis; this has not been confirmed. The colicins have also received much consideration. The most important antibiotics discovered since penicillin have been obtained largely from cultures of actinomycetes, all from members of the genus *Streptomyces*. These include not only the antibacterial and antifungal agents already listed, but also various antiviral and possibly antitumor agents, which one can only hope may prove to be effective.

Some antibiotics are acids, others are bases, still others are amphoteric compounds. Some are readily soluble in water, others are soluble in organic solvents. Some are heat-stable and others are heat-labile. Some have their optima at a basic reaction, others at a neutral or acid reaction. Some are readily adsorbed from the digestive system into the body fluids, others are not. Antibiotics vary, therefore, in their practical utilization for disease control. Some are most effective orally, others parenterally, still others topically. Among the many antibiotics that have so far been isolated, only very few have found practical application. These are, in order of their discovery:

Tyrothricin has a narrow antibiotic spectrum and is active primarily against Gram-positive bacteria and cocci. It tends to exert a hemolytic effect upon the blood, which limits its use to topical applications.

Penicillin is still probably the most important antibiotic or group of antibiotics discovered so far. It has a fairly broad spectrum, although it is active chiefly against Gram-positive bacteria, various cocci, and spirochetes. It is the least toxic of all. It possesses certain limitations, chief among which are lack of activity against many bacteria, a certain degree of sensitization of many individuals, and the gradual development of resistance to it among certain sensitive bacteria.

Streptomycin tends to fill the gap left by penicillin. Although not so potent, on a weight basis, it is highly effective against a variety of diseases not known previously to be subject to any form of therapy. It has found extensive application in the treatment of tuberculosis, as well as of numerous infections caused by Gram-negative bacteria, such as tularemia and brucellosis, and various Gram-positive bacteria, especially those that have become resistant to penicillin. The limitations of streptomycin comprise the potential causation of vestibular disturbances and its effect on the auditory system when used in large doses, and the rapid development of resistance among sensitive bacteria after prolonged contact with it. Streptomycin and penicillin form an

ideal combination for the treatment of numerous diseases.

Chloramphenicol, *aureomycin*, and *terramycin* are active upon various Gram-positive and Gram-negative bacteria, as well as upon rickettsiae and some of the larger viruses. They are usually administered orally and have found extensive application in the treatment of such diseases as typhoid fever, typhus fever, whooping cough, and trachoma.

Among the other antibiotics that have become established as chemotherapeutic agents, it is sufficient to mention *bacitracin*, *neomycin*, and *polymyxin*. These compounds tend to exert a somewhat toxic effect when administered parenterally. The first and last also possess narrow spectra. They are, therefore, used largely topically and orally; they are useful in cases of generalized infections that are not readily controllable by other forms of therapy. Neomycin is used alone or in combination with other agents for the treatment of various infections, both orally and topically.

UTILIZATION OF ANTIBIOTICS

Antibiotics have so far found several important fields of application, which can be briefly summarized as follows:

1. Control of numerous infectious diseases of man.
2. Control of diseases of domestic animals.
3. In the nutrition of non-ruminant animals.
4. In the preservation of biological materials, such as bull semen and virus preparations.
5. In certain plant diseases.

There are other potential uses, not as yet clearly understood or developed, as in seed germination and in plant growth.

It is in the treatment of human diseases that antibiotics have made their greatest contribution. It may be truthfully said that antibiotics have revolutionized medical practice. A brief summary may therefore be justified of the role that antibiotics are now playing in the control of various known human and animal diseases.

1. *Diseases caused by cocci (streptococci, pneumococci, staphylococci, gonococci) and various Gram-positive rod-shaped bacteria, comprising aerobic and anaerobic organisms.* These bacteria are highly sensitive to penicillin, to streptomycin, and to a number of other antibiotics, notably aureomycin, terramycin, neomycin, bacitracin, tyrothricin, and erythromycin. These antibiotics have the capacity to attack in a highly efficient manner all of the infections caused by these bacteria. Organisms that become or are resistant to one antibiotic are sensitive to one or more of the others. Recently, there have

come into popular use combinations of two antibiotics, such as penicillin and streptomycin, bacitracin and neomycin, which are usually more effective than a single agent.

2. *Diseases caused by Gram-negative bacteria* are, for the most part, resistant to penicillin, to bacitracin, and to some of the other antibiotics. They are sensitive to streptomycin, chloramphenicol, aureomycin, neomycin, and terramycin, which have found extensive application in the treatment of infections caused by these bacteria. In some cases, as in whooping cough and typhoid, one antibiotic, such as chloramphenicol, is preferable to others. In other cases, as in tularemia, another is more effective, such as streptomycin. In still other cases, as in urinary tract infections, several substances are effective, and can thus be used almost interchangeably, notably, aureomycin, terramycin and neomycin. Certain antibiotics are particularly effective in the treatment of certain types of infection, as in the use of polymyxin for *Pseudomonas* infections. Utilization of the synergistic action of two substances, such as aureomycin and streptomycin, or of an antibiotic with a synthetic agent, such as streptomycin and sulfadiazine, in the treatment of certain infections, offers considerable promise of exerting a greater effect, and tends to overcome the danger of potential development of resistance among the sensitive organisms.

3. *Diseases caused by acid-fast bacteria.* Because of their peculiar characteristics, these diseases are among the most resistant to chemotherapy. The discovery that streptomycin can be utilized in the treatment of tuberculosis has provided a great stimulus to the search for new antibiotics and synthetic compounds that possess similar properties. It has aroused hope that the control of this highly important group of diseases may at last be within our reach. The fact that, among the antibiotics, streptomycin is not alone in this respect is indicated by the latent potentialities of a number of other antibiotics, notably, neomycin, viomycin, mycomycin, and nisin. The possible development of strains of *M. tuberculosis* resistant to streptomycin has suggested the supplementary use of other agents, such as para-aminosalicylic acid. The recent introduction of isoniazid for the treatment of this group of diseases has presented new problems and aroused greater hope.

The treatment of leprosy has not yet been solved satisfactorily, although some antibiotics have been found to be effective. Indications are that, sooner or later, this ancient disease of man will become subject to chemotherapy.

4. *Spirochetal diseases.* Several antibiotics, notably penicillin and bacitracin, have a remarkable effect upon syphilis and other diseases caused by spirochetes. The utilization of antibiotics in the

treatment of these infections has gradually superseded the use of salvarsan and other methods of treatment in vogue before the advent of antibiotics.

5. *Rickettsial diseases.* These diseases, comprising typhus fever, scrub typhus, spotted fever, and a variety of others, are readily subject to therapy by a number of antibiotics. These include chloramphenicol, aureomycin, terramycin, and erythromycin, all of which appear to be able to control virtually this whole group of infections. The choice of the particular drug depends largely upon circumstances.

6. *Fungous diseases.* Various antibiotics are known to possess pronounced fungistatic and fungicidal properties. Unfortunately, most of them are too toxic for general use. This is true of actidione, fradidin, fungicidin, and others. Although none has as yet found application in the generalized treatment of fungous infections, there are indications that some antibiotics, such as fungicidin RAW, rimicidin, ascocin, and candicidin, will soon be found capable of controlling some of these diseases.

7. *Protozoan and other diseases due to animal forms.* No true antibiotic is now known to be significantly effective against diseases caused by the malarial and certain other important protozoan organisms. The ability, however, of various agents to affect amebae, trypanosomes, trichomonads, and other protozoa has been definitely established. Some of these substances have already found practical application in chemotherapy. This is true, for example, of aureomycin, terramycin and fumigallin, which are used successfully against amebic dysentery, although it is claimed that the favorable effect consists largely in killing the bacteria upon which the amebae feed.

8. *Viral diseases.* Some of the larger viruses, notably the psittacosis and lymphogranuloma venereum groups, are susceptible to various antibiotics, such as chloramphenicol, aureomycin, and terramycin. The usefulness of these in such viral infections as trachoma has also been definitely established. Their use in other viral diseases, such as mumps, infectious mononucleosis, influenza, and so-called viral pneumonia, requires further confirmation or elucidation. No antibiotic has so far found practical application in the treatment of diseases caused by the smaller viruses, of which the causative agents of the common cold and of poliomyelitis are most important. Recently reports of the formation of specific antiviral agents against some of the viruses were published. The practical potentialities of these preparations, however, have not been established.

9. *Neoplasms.* Tumor or cancer cells are known to be subject to the action of various microorganisms and their products. It is sufficient to mention the effect of certain bacteria such as *Sporosarcina*

ureae, of trypanosomes such as *Trypanosoma cruzi*, and of fungi belonging to the *Aspergillus fumigatus* order. The effective agents so far isolated have proved to be too toxic for practical use. The evidence obtained suggests, however, that sooner or later, suitable chemotherapeutic agents will be found.

10. *Shock and radiation diseases.* When the human or animal body is subject to shock or to the effect of injurious radiations, it becomes a victim of the otherwise uninjurious intestinal flora and other bacteria inhabiting the human body. In combating the injurious action of such bacteria, certain antibiotics, such as neomycin and aureomycin, may prove to be highly helpful. These phenomena may be of tremendous importance in certain emergencies upon which we need not dwell here.

The story of tuberculosis is that of a continuous battle of mankind against one of its greatest enemies, one that has a particular capacity for attacking its victims at a time of great stress, as in war and in immediate postwar periods. No wonder that this dreadful disease has been called the "Great White Plague"! Less than a decade ago, even after the introduction of the sulfa compounds and penicillin, the medical profession was inclined to the belief that no drug effective against tuberculosis would ever be found. The discovery of streptomycin pointed a way to successful chemotherapy of the disease. It has aroused hope that before very long this scourge of mankind will be brought under complete control. Numerous antibiotics are now known to possess anti-tuberculosis properties. Streptomycin, alone or combined with para-aminosalicylic acid or with isoniazid, is a highly important agent in the treatment of tuberculosis.

Numerous clinical investigators followed the early studies of Hinshaw and Feldman in emphasizing the fact that streptomycin reversed the trend of tuberculosis and that the majority of the patients treated were improved. This antibiotic was found to bring about a rapid fall in temperature and accompanying symptomatic improvement and a regression of pulmonary lesions. It has found a definite place in the treatment of miliary tuberculosis and tuberculous meningitis, tuberculous sinuses and fistulas, of bone and joint tuberculosis, and of various forms of early and pulmonary tuberculosis.

The conclusion was reached that the most significant contribution of antibiotics and synthetic compounds in the treatment of tuberculosis is that they have demonstrated that the chemotherapy of this disease, like that of most other infectious diseases, is possible. In my recent travels through southern and western Europe, I was profoundly impressed by the successful results obtained in the treatment of certain forms of tuberculosis by streptomycin. Re-

covery rates as high as 50 to 75 per cent in cases of meningeal and miliary tuberculosis were claimed.

As one surveys the broader aspects of the subject of antibiotics; as one realizes that a mere fraction of the microorganisms present in numerous soil types throughout the world, in various water basins, on numerous food products, and on many other substrates have so far been examined for their ability to produce antibiotics; as one visualizes the great variety of chemical compounds which are formed by these organisms and which have the capacity of inhibiting the growth of and even of destroying other microorganisms; as one finds that some of the isolated compounds are not very toxic to animals and possess properties which would render them desirable chemotherapeutic agents—one is inclined to become optimistic and to hope that, before long, all human and animal infections, and possibly plant infections as well, can be combated if not completely eliminated by the utilization of antibiotics.

One may stop, therefore, and analyze the problems in the field of antibiotics that face us at present. We recognize the need for:

1. New antibiotics more active against infectious agents that have become resistant to known antibiotics.

2. New antibiotics capable of exerting a synergistic action, when combined with other known chemical or biological agents, in combating chronic diseases, such as brucellosis, leprosy, and tuberculosis.

3. Antibiotics suitable for combating fungous diseases, filterable viruses, and neoplastic diseases.

4. A better understanding of the mode of action of antibiotics upon various microorganisms, of the mechanism of the development of resistance, and the problem of overcoming it.

5. A better understanding of the role of antibiotics in animal nutrition and the over-all effect upon the human body.

6. Antibiotics to be used in the control of plant diseases.

The search for new antibiotics will continue. New approaches will be found and new screening methods will be developed. Many substances will be discovered which will prove to be better than those now known, or which will act upon diseases not susceptible at present to chemotherapy. Finally, more profound knowledge of the physiological and biochemical mechanisms of the action of antibiotics upon bacteria, viruses, and other pathogenic organisms may help to clarify the still obscure aspects of their mode of action, and thus possibly lead to the discovery, or even to the synthesis, of new and better chemotherapeutic agents.

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Double Contrast Visualization of Joints

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SINCE CONVENTIONAL roentgenographic studies often do not supply the information needed for evaluation of intra-articular derangements, several modifications of ordinary procedures have been developed to obtain better visualization. All have objectionable features, either of inadequacy or of harm to the patient.

(a) Forceful traction to permit contrast visualization of cartilages in the knee and other joints has met with a degree of success. Particularly in the case of smaller joints, a vacuum spacing may be produced by this means. Within a period of a few minutes, however, diapedesis of fluid occurs within the joint to an extent that the intra-articular cartilages and other intra-articular components no longer can be visualized. And of course in cases in which there is already fluid in the joint owing to effusion, this method is impractical. Even if the knee is relatively normal, the medial meniscus can be visualized by this means in only about 70 per cent of cases; the lateral meniscus, in less than 7 per cent. The main attribute of this means of solving the problem is the relative simplicity of the procedure. There are many exponents for it—Nordheim,¹⁹ Evans,⁹ Long,¹⁶ Gershon-Cohen,¹⁰ and others.

(b) Injection of "positive media" such as solutions of inorganic iodides and organic iodine compounds including iodized oils. Particular reference is suggested to the works of Burman, Tunick and Pomeranz,⁶ Boyd,⁴ Keller,¹⁴ Jepson¹¹ and Jowett.¹² Most observers have expressed condemnation of this procedure. The synovial lining of joints is far more sensitive than epithelial-lined channels or sinuses through granulomatous or fibrous tissue recesses. Severe pain is produced by injection of almost any of the media. Intra-articular fibrosis has sometimes ensued.

(c) Injection of gas provides so-called "negative" contrast. Various gases have been used including air, nitrogen, nitrous oxide, ethylene, carbon dioxide and oxygen. Air remains in the joint too long. Carbon dioxide is too rapidly absorbed. Nitrous oxide and ethylene have been recommended but the authors' experience is limited to the use of oxygen. Pulmonary embolus has been reported even with the use of oxygen, although this can be avoided by injecting only a limited quantity (50 cc. to 100 cc.) pre-

• Double contrast arthrography, a method in which a dye and then oxygen is injected, can be used to visualize pathologic changes in the knee joint, that otherwise cannot be recognized preoperatively. In 28 cases in which the procedure was carried out there was no evidence of damage owing to it.

This method is worthy of consideration for visualization of conditions in the shoulder joint, hip, or any joint having a distensible cavity.

ceded by aspiration to make sure that the needle is not in a vein. There should never be a direct connection between the gas tank and the joint. This technique has many advocates. Reference is suggested particularly to the writings of Kleinberg,¹⁵ Simon, Hamilton and Farrington,²² Quaintance,²⁰ Mohlmann and Madlener,¹⁸ Anderson,¹ Brook, MacKenzie and Smith,⁵ Meschen and McGaw,¹⁷ Kelikian and Lewis,¹³ Sachs, McGaw and Rizzo,²¹ and Cullen and Chance.⁸

(d) The combination of ray-opaque medium and ray-transparent medium has been used for "double contrast roentgenography." The procedure has been criticized as too complicated, and apparently less developmental work has been done on it than on any of the other methods mentioned. It does have sponsors, however, including Bircher and Oberholzer,² Clausen,⁷ and Blonek and Wolf.³

(e) Endoscopy has been attempted but there are many criticisms of this procedure, both on account of the risk involved and the diagnostic inefficiency.

"DOUBLE CONTRAST" STUDIES

The authors carried out studies with the "double contrast method." In this procedure, sodium iodo-methamate (Neo-Iopax®) is introduced with sterile precautions, after which the joint is moved by alternating flexion and extension and by ballottement of the patella (in the case of the knee) to spread the material. As a rule 10 cc. of dye is injected, and then most of it is removed by aspiration. This may be repeated.

As the medium is irritating it is necessary to anesthetize the synovial membrane. For this purpose 2 per cent metycaine is used and the solution is in-

jected intracutaneously, subcutaneously and, several cubic centimeters of it, within the joint. Ten minutes later the dye is injected. Besides preventing pain from the dye, anesthetization produces relaxation, which facilitates the manipulation for the different positionings required in the roentgenographic procedure itself.

After the iodide material has been introduced and distributed into all recesses of the joint and the surplus is withdrawn, oxygen is injected from a 100 cc. sterile syringe. As the rubber tubes used for connection to the oxygen tank must also be aseptic, precautions must be observed in making the connection. The "open" end of the rubber tubing should contain a sterile cotton plug (filter). Oxygen should be introduced into the tubing and a sterile needle used to withdraw the desired amount from it (in the case of the knee as much as 100 cc.). The oxygen then is injected into the joint.

After the examination is completed, the synovial cavity is washed with sterile saline solution to eliminate all the iodide. For this purpose the authors use 12 successive fillings and emptyings through the needle although perhaps so much washing is not necessary except in cases of iodine sensitivity.

ROENTGENOGRAPHIC TECHNIQUE

As there is often a little solution still in the knee joint at the time of oxygen injection, the pictures should be taken with the patient prone and the foot of the table elevated 20 to 30 degrees so that the fluid may gravitate into the suprapatellar pouch and be out of the way of the structures being examined. For visualization of the menisci and other intra-articular structures, it is well to flex the knee about 15 degrees and to apply traction to the leg to separate the cartilages. Adduction or abduction can be used to open the space at the outer or inner side. For visualization of the posterior articular cartilages of the patella, the knee should be extended and the patient should relax the quadriceps muscle. An elastic bandage applied over the suprapatellar pouch may help keep the oxygen in the main portion of the joint. To show the posterior pouch in the lateral view, the knee should be flexed 60 to 70 degrees.

For such studies it is advisable to use higher than conventional kilovoltage—70-80 k.v. even for a knee of average dimension. Stereoscopic views are worth while and special views may be indicated by the nature of clinical observations.

INTERPRETATION

Interpretation of the double contrast arthrograms is slow to be learned.

Figure A illustrates some of the tissues of a normal knee joint visualized by this method. The needle

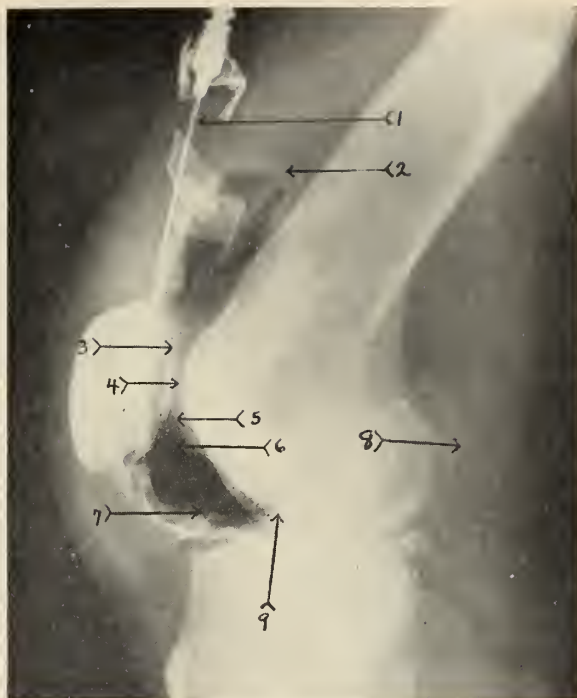


Figure A.—Double contrast arthrogram of normal knee. (1) Cannula remaining in during examination. (2) Upper limits of distended suprapatellar pouch. (3) Border of bony part of patella near its articular cartilage. (4) Border of articular cartilage of patella. (5) Border of the bony portion femoral condyle covered with articular cartilage. (6) Articular cartilage femoral condyle. (7) Intra-articular ligament (ligamentum mucosa). (8) Posterior synovial lining. (9) Anterior cruciate ligament.

was left in for this study but ordinarily it is removed for roentgenography and reinserted for the aspiration and flushing. Note that the film of opaque medium adhering to the surfaces is of minimal degree, yet it actually renders the surfaces far more visible than when oxygen alone is used.

Figure B illustrates findings in chondromalacia of the patella. Compare the shadow of the articular cartilage of the patella, which is roughened at its articular border and has irregularity of opacity in its outline, with the surface outlines of the normal cartilage of the patella in Figure A.

Cartilaginous pathologic changes may be visualized as ragged or irregular outlines of the opaque medium due to the penetrating crevices, partially detached fragments or roughened surfaces. Thinning of the cartilage or absence of it can be recognized by the narrowness of spacing between the surface layer of the opaque medium and the outlines of the articular osseous cortex.

Figure C illustrates the superior demonstration of the semilunar cartilages by this method. In case of a detached cartilage, an opaque marking is to be expected on the capsule in the region whence the cartilage was detached, with transparency owing to

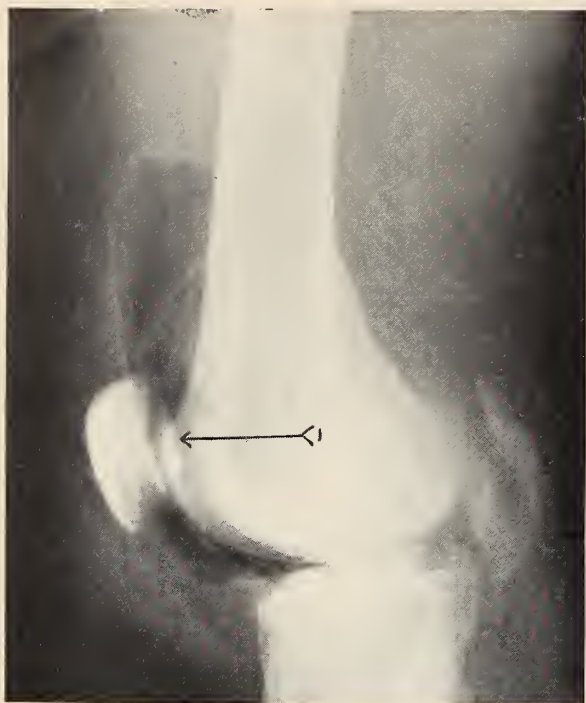


Figure B.—Double contrast arthrogram of chondromalacia of patella. (1) Roughening of border of articular cartilage of patella.

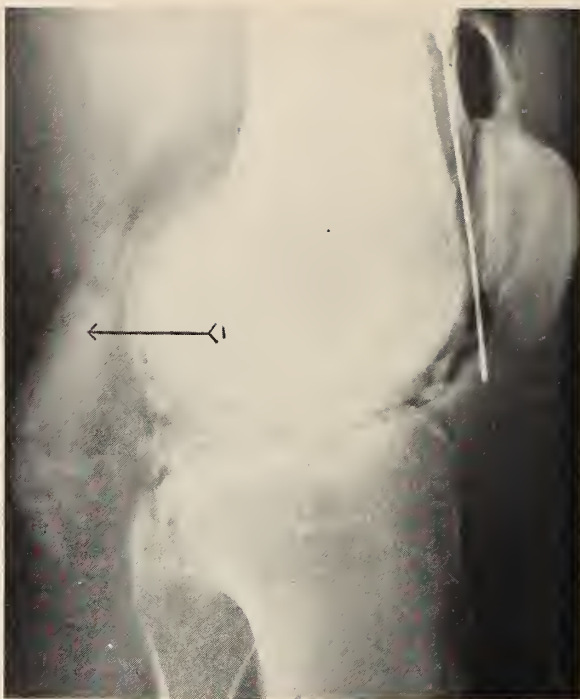


Figure D.—Double contrast arthrogram of joint hernia. (1) Hernia sac distended with synovial fluid containing low concentration of dye and gas bubbles.



Figure C.—Double contrast arthrogram of bucket handle fracture of medial meniscus. (1) Lateral meniscus normal. (2) Medial meniscus displaced. (3) Articular cartilage of femoral condyle. (4) Position that should be taken by medial meniscus is vacant. Note opaque medium adhering to the capsule where cartilage is detached.

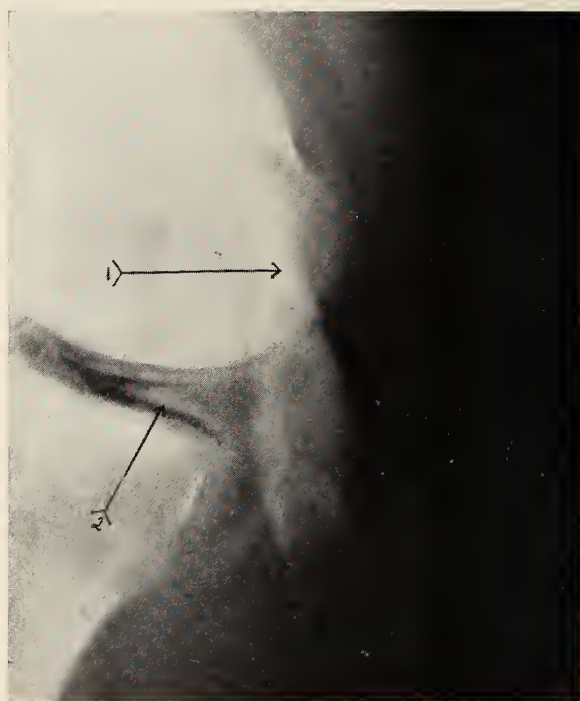


Figure E.—Double contrast arthrogram oblique view of joint hernia. (1) Synovial hernia. (2) Visualized medial meniscus.

gas in the location normally occupied by the cartilage. Detached portions of the cartilage may be covered with a film of opaque medium and so identified. Irregular or linear blotchy markings on the cartilage indicate crevices or tears. Abnormal contours may indicate the presence of a cyst within the meniscus.

Figures D and E exemplify abnormalities in the synovial membrane, in this instance the outlines of a synovial hernia. Similarly, this method may serve to distinguish adhesions or intra-articular ligaments. Synovial proliferation may clearly become visualized.

COMMENT

In clinical observation of 28 patients who were examined by this method of double contrast visualization of the intra-articular structures, there was no evidence of damage attributable to the procedure. About half of the patients were operated upon after the roentgen examination was carried out and there was no macroscopic evidence that the procedure had disturbed the synovia. In one instance, tissue was studied microscopically and there was no evidence of reaction to the iodide.

490 Post Street.

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Vesicular and Bullous Diseases of the Skin

Cytologic Diagnosis

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FOR YEARS clinicians have needed an objective method for the rapid differential diagnosis of vesicular and bullous diseases of the skin. Many of these conditions, such as herpes simplex and herpes zoster, are caused by viruses. Precise methods for the diagnosis of viral diseases are provided in large medical centers, but by and large, such services are not available to physicians, elsewhere. Biopsy examination has therefore been the main diagnostic support, but that procedure is time-consuming, expensive, and occasionally disfiguring.

This communication outlines a new diagnostic technique that is superior in many ways to the methods now in use.

Tzanck^{2, 3} was the first to note that distinctive cell types could be found in scrapings from the surface of dermal lesions. His observations have been confirmed and extended by workers in this country.¹ The method outlined in this report has been developed to the point where a number of vesicular entities can be diagnosed with certainty by cytologic examination.

METHOD

The first step is to transfer epidermal cells from a dermal lesion, preferably a new one, to a glass slide with as little trauma as possible to the specimen. Although satisfactory preparations can often be made from crusted lesions, comparative studies have shown that material from an early lesion is more suitable than from a mature one and should be used if available.

To obtain the specimen the "roof" of the vesicle is reflected and the base of the lesion is blotted dry with sterile gauze. The lesion is then "pinched up" to prevent gross bleeding which would render microscopic examination of the slide difficult.

The sharp edge of a scalpel held perpendicular to the surface of the skin is then scraped firmly across the base of the lesion. One or two quick strokes is usually sufficient, since in most instances the cells are only loosely attached. The collected material is immediately transferred to a clean glass slide and spread gently with a minimum of "scrubbing." The

• A new technique, first described by Tzanck, for diagnosis of vesicular and bullous diseases of the skin by cytologic examination of material firmly scraped from lesions has a number of advantages over excision of biopsy specimens. It takes relatively little time, is painless, simple and inexpensive. The method also has value in research and teaching.

preparation is then air dried, fixed in methyl alcohol, and stained with commercial Giemsa or hematoxylin-eosin stains.

The entire operation from the incision of the vesicle to the final examination of the slide under the microscope may be performed in one hour.

A brief description of the cytologic features to be found in some of the vesicular dermatoses follows:

*Herpes Zoster, Herpes Simplex, Kaposi's
Varicelliform Eruption, Varicella*

The cytologic features in these four diseases are similar and at present there is no way to distinguish one from the others cytologically. The consistent feature is the presence in profusion of multinucleate giant cells, some of which attain dimensions ten times those of normal epithelial cells. Viral inclusion bodies are seen especially well in herpes zoster and varicella. The "rosette" formation shown in Figure 1, D has so far been seen only in herpes zoster. The significance of this peculiar formation is not clear. A morphologic resemblance to the "L. E." cells seen in lupus erythematosus will be noted. It is possible that the rosette represents *in vivo* phagocytic activity of leukocytes against the abnormal giant epithelial cells. This formation is observed in about 20 per cent of the specimens from lesions of herpes zoster. Giant cells or rosette formations are not seen in specimens from the lesions of other viral diseases of the skin such as variola and vaccinia.

*Pemphigus, Benign Familial Pemphigus,
Pemphigus Erythematosus*

The classic "pemphigus" epithelial cell is present in great numbers in specimens taken from the lesions of these three diseases. The cell is rounded and has an abnormally large nucleus. Peripheral "condensation" of cytoplasm, observed as a darkly stained

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basophilic margin, is a constant feature. The cells are usually arranged in a mosaic pattern and are present in profusion. No giant cells are seen.

In dermatitis herpetiformis the epithelial cells are normal, but the large number of eosinophils present suggests the diagnosis.

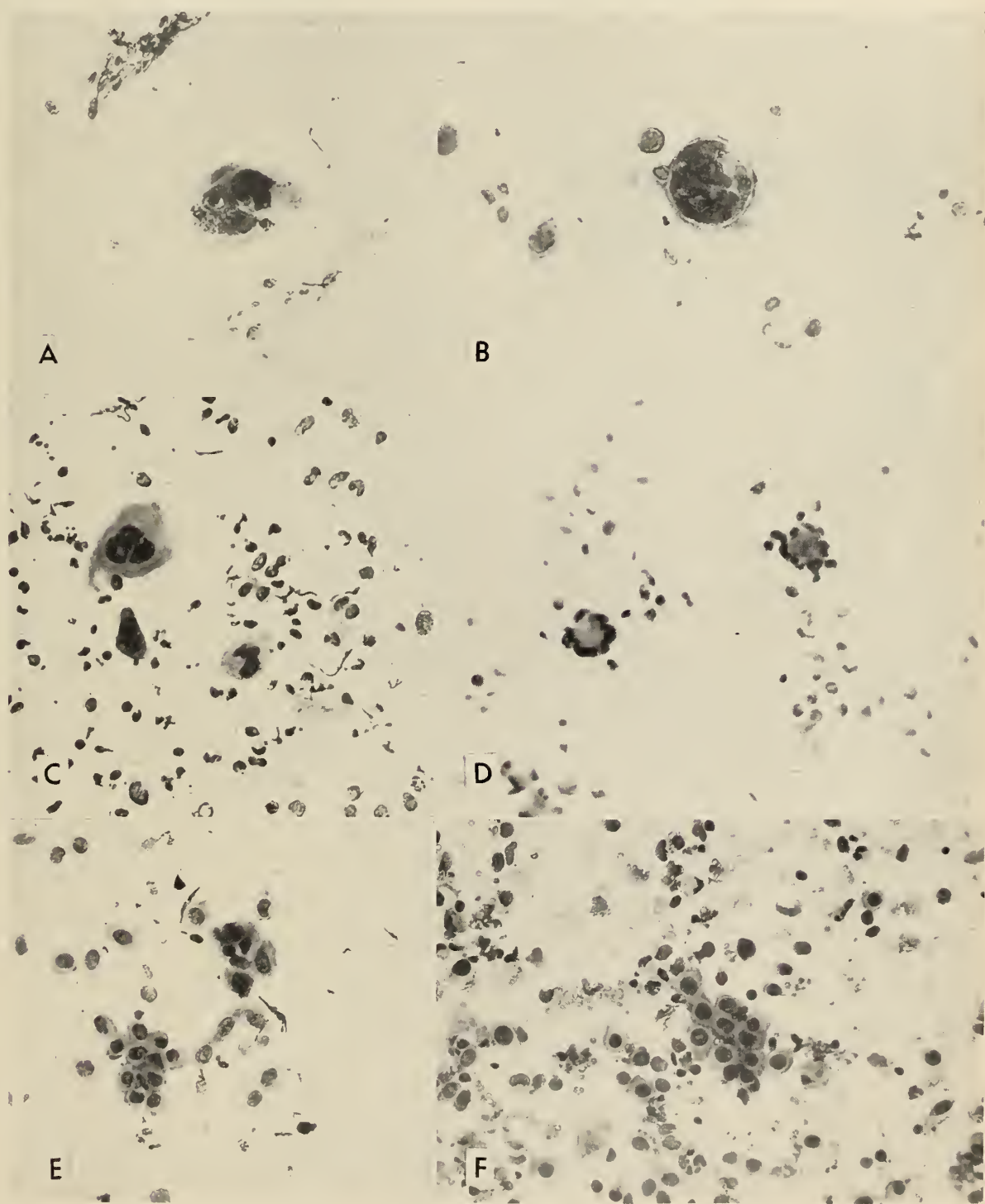


Figure 1.—*A*. Herpes simplex giant cell with intranuclear inclusion body ($\times 500$). *B*. Herpes zoster multinucleate giant cell ($\times 500$). *C*. Varicella giant cells ($\times 250$). *D*. Herpes zoster "rosettes" (giant cells being phagocytosed by leukocytes?) ($\times 250$). *E*. Pemphigus, showing a mosaic of abnormal epithelial cells ($\times 250$). *F*. Benign familial pemphigus, showing same cytologic picture as pemphigus ($\times 250$).

cytes are more commonly seen in allergic contact dermatitis.

DISCUSSION

Although it is not suggested that the cytologic method should replace biopsy as a means of diagnosis, for vesicular lesions in which the individual cells are freely obtainable, certain advantages are obvious.

1. *Speed.* A finished preparation ready for examination may be prepared in one hour or less.

2. *Painlessness.* In ordinary circumstances, the procedure causes no discomfort to the subject.

3. *Simplicity.* Cutting and suturing are not necessary.

4. *Inexpensiveness.* Cytologic smears may be prepared at a fraction of the cost of a biopsy, and the procedure can be carried out in a physician's office.

5. *Research.* Histochemical, enzymatic and other special procedures are frequently more easily performed on cytologic preparations. The minute study of such features as inclusion body formation and nuclear and cytoplasmic detail are much more easily performed on individual cells as compared with the biopsy. Multiple preparations are easily obtained from the same lesion for teaching purposes.

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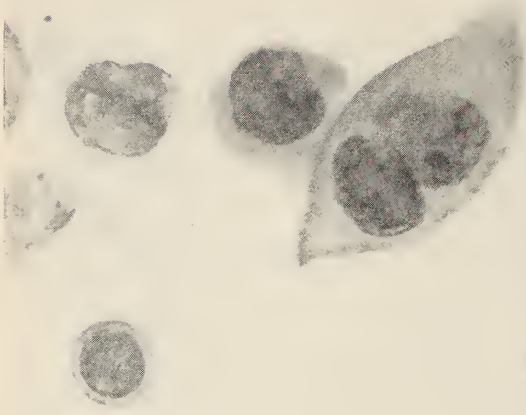


Figure 2.—Cytologic detail in the nucleus of a giant cell in herpes zoster ($\times 1,000$).

Contact Dermatitis, Burns, Primary Irritant Dermatitis.

In this group of diseases the cytologic features are large numbers of leukocytes and a few normal epithelial cells. Fibrin is usually present in moderate amounts. Polymorphonuclear leukocytes predominate in primary irritant dermatitis, whereas lympho-

Primary Carcinoma of the Gallbladder

Review of 173 Cases

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INTEREST IN PRIMARY CARCINOMA of the gallbladder is dulled by the relative infrequency of the disease and even more because it is generally recognized to be almost incurable. Five-year cures, such as that reported by Booher and Pack,² are rare indeed. Finney and Johnson⁶ declare, "In many ways it seems hardly worth while to offer a paper on such a surgically hopeless condition as carcinoma of the gallbladder."

This gloomy situation has discouraged reports on this disease but has, on the other hand, encouraged study and speculation in an effort to arrive at better clinical results. Of chief interest to surgeons and pathologists has been the relationship of carcinoma of the gallbladder to the occurrence of gallstones, which are considerably more common in carcinoma of the gallbladder than in the general population. The possible etiological significance of this fact has intrigued pathologists and other investigators. Surgeons have considered with interest but have not agreed on whether the danger of malignant change is in itself an indication for cholecystectomy in asymptomatic cholelithiasis.

This report is based on a review of 173 cases of primary carcinoma of the gallbladder. The sources are autopsy reports from 1918 to 1948 on file at the Los Angeles County Hospital and surgical pathology reports for the years 1939 through 1947 inclusive plus the year 1949. (The surgical pathology material for the year 1948 was not indexed and hence was omitted.)

The clinical records, autopsy protocols and slides were reviewed and analyzed for pertinent data on incidence, clinical features and pathological findings. A few cases were omitted because information was insufficient or because the diagnosis seemed doubtful after review of the exhibits.

It might be mentioned in passing that, except for metastatic carcinoma, only three other malignant tumors of the gallbladder were recorded at the Los Angeles County Hospital in the period covered by this report. One of these was a primary fibrosarcoma of the gallbladder which occurred in a calculous

• *One hundred seventy-three cases of primary carcinoma of the gallbladder were analyzed. In the group studied they made 2.11 per cent of all malignant tumors found at autopsy and were found in 1.89 per cent of all cases in which operation was done on the biliary tract. There was no appreciable change in the incidence of this tumor at autopsy during the period studied (1918-1948) at the Los Angeles County Hospital. Sixty-eight per cent of the cases were in females. A particularly high incidence was noted in Mexican females.*

Upper abdominal pain, loss of weight, nausea and vomiting, jaundice, and palpable mass or enlarged liver were the most common clinical features. Approximately one-third of the patients in whom the lesion was found at operation and one-fifth of all the patients whose records were studied had a history of chronic gallbladder disease.

All but two of the 38 patients operated on were dead or had clinical recurrence within two years. One was alive and well 12 years after cholecystectomy.

The most common gross appearance, particularly at autopsy, was a large tumor mass replacing the gallbladder and radiating to nearby organs, particularly the liver. In about one-third of the cases the tumor was grossly limited to the gallbladder. Polypoid tumors occurred in only about 10 per cent of the cases and most of the tumors were diffusely growing adenocarcinoma. Perforation appeared in nine cases, usually with fistula to the gastrointestinal tract. All of the tumors were histologically adenocarcinoma, usually of simple glandular structure. No purely squamous cell growth occurred.

Gallstones were found in 79.8 per cent of the cases.

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gallbladder and caused death by extensive metastases. The other two were instances of lymphosarcoma and reticulum cell sarcoma involving the gallbladder as part of a widespread disease.

TABLE 1.—Incidence of Carcinoma of the Gallbladder (173 Cases)

	Autopsies	Carcinoma of Gallbladder			Operations on Biliary Tract	Carcinoma of Gallbladder	
		Cases	Per Cent of Autopsies	Per Cent of Malignant Tumors		Cases	Per Cent
Los Angeles County Hospital....	38,757	135	0.35	2.11 (all malignant tumors)	2,011	38	1.89
Collective Review of Literature by Arminski ¹	206,098	908	0.43	4.53 (carcinoma only)	46,480	569	1.22

TABLE 2.—Comparative Incidence of Primary Carcinoma of the Gallbladder Found at Autopsy (Los Angeles County Hospital, 1918-1947)

Years	Autopsies	Malignant Tumors Found	Per Cent of All Autopsies	Carcinoma, Gallbladder		Carcinoma, Pancreas		Carcinoma, Lung	
				Cases	Per Cent of All Tumors	Cases	Per Cent of All Tumors	Cases	Per Cent of All Tumors
1918-22	1,176	132	11.2	3	2.3	9	6.8	0	0
1923-27	3,496	493	14.1	10	2.0	22	4.5	21	4.3
1928-32	5,055	659	13.0	14	2.1	28	4.2	29	4.4
1933-37	9,647	1,433	14.8	31	2.2	58	4.0	83	5.8
1938-42	10,741	1,908	17.8	43	2.3	98	5.1	212	11.1
1943-47	8,632	1,759	20.4	34	1.9	68*	4.9	158*	11.3
Total	38,757	6,384	16.5	135	2.1	283	4.7	503	8.4

* 4 years only (1943-46).

No attempt to review the literature was made in connection with this report. An excellent collective review was published by Arminski¹ in 1949. He reviewed reports of 908 cases among 206,098 autopsies reported in the world literature from 1894 to 1940, and 569 cases among 46,480 operations on the biliary tract from 1891 to 1941. He added reports of 25 cases he had observed. Since then (up to February 1952) there have been seven additional reports in the American literature, reporting 193 additional cases.

INCIDENCE

Data on 135 of the 173 cases covered in this review were obtained from the autopsy reports. Those cases made up 2.11 per cent of the total number of malignant tumors found at autopsy during the 25-year period covered. The other 38 cases of primary carcinoma of the gallbladder were studied in the surgical pathology laboratory during a ten-year period. They made up 1.89 per cent of all cases in which operation was done on the biliary tract and 2.8 per cent of all cases in which cholecystectomy was carried out. The incidence observed in autopsy reports (Table 1) was considerably lower than that reported by Arminski.¹

The records of all cases of malignant tumor in which autopsy was done at the Los Angeles County Hospital from 1918 to 1947 were analyzed recently by Steiner, whose findings, both published and unpublished, have been freely drawn upon in preparing this report. The author is indebted to him for basic data essential to study of incidence and for specific observations regarding carcinoma of the gallbladder.

The quinquennial incidence of primary carcinoma of the gallbladder as observed at autopsy at the Los Angeles County Hospital for the period studied is shown in Table 2. It is compared with the findings of Steiner, Butt, and Edmondson¹¹ at the same hospital for the incidence of all malignant tumors, primary carcinoma of the lung and carcinoma of the pancreas, their figures being modified slightly to include 1947. Carcinoma of the lung is included for purposes of comparison as a tumor of increasing incidence, and carcinoma of the pancreas as a tumor which has not increased in incidence and which is clinically related to primary carcinoma of the gallbladder. This table indicates a fairly constant incidence of the disease during the period studied.

Steiner in his review of malignant tumors found at autopsy at the Los Angeles County Hospital tabulated all of the cases according to sex and race. Most patients at the Los Angeles County Hospital are of the Caucasoid, Mexican and Negroid races, 98.8 per cent of all autopsies being done in these races. Mexicans are listed separately because so large a proportion (17.4 per cent) of all autopsies at this hospital were done on persons of that race.

In analyzing the age, sex, and racial distribution for cases of primary carcinoma of the gallbladder seen at autopsy, Steiner found a notably higher rate in Mexican females than in any other group: While the corrected sex ratio of 2.83 females to 1 male reflected the known predisposition of females to this disease, the incidence in Mexican females was almost three times that in Caucasoid females. He also noted that the peak of incidence was at a lower age in Mexican than in Caucasoid females.

The distribution by age, sex, and race for the 173 cases recorded in autopsy reports and in surgical pathology reports is shown in Table 3. Of these, 118 or 68.2 per cent were in females, a proportion close to the 73.1 per cent in females reported by Arminski.¹ Table 3 also illustrates that the disease occurs more frequently in younger persons among Mexicans than among Caucasoids. Four of the seven patients under 40 years of age were Mexican females. The sex and racial distribution of the 173 cases compared with the percentage distribution of the same groups in 35,293 autopsies was as follows:

Race-Sex Group	Percentage of All Cases of Carcinoma of Gallbladder	Percentage of All Autopsies (35,293)
Caucasoid male	27.2	48.1
Caucasoid female	42.8	27.0
Mexican male	3.5	9.4
Mexican female	21.9	8.0
Negroid male	1.2	3.4
Negroid female	3.5	2.9

The unusually high incidence in Mexican females is further illustrated by the fact that carcinoma of the gallbladder comprises over 8 per cent of all malignant tumors found at autopsy in Mexican females.

CLINICAL FEATURES

Symptoms and Physical Findings

The incidence of the most common symptoms and signs in the 173 cases is shown in Table 4. Percentages are based on cases in which definite information was available. The findings are similar to those reported in the literature.

Abdominal pain when present was usually in the right upper quadrant of the abdomen and was of the colicky type in 21 per cent of the surgical pathology cases and 9.3 per cent of all the cases. The pain was variously described as dull, sharp, intermittent or continuous. Radiation to the back or right shoulder was present in some cases. The duration of pain in the surgical pathology group varied from one week to over ten years. Abdominal tenderness was present in many cases, particularly in the surgical group.

History suggestive of chronic gallbladder disease was reported for 34 per cent of the surgical group and for 22 per cent of all cases. In the collective review of Arminski¹ the incidence of past history of gallbladder disease was 52 per cent.

Weight loss, frequently rapid and pronounced, occurred in almost all cases, even those in which patients were still obese when admitted to the hospital.

Jaundice was present in 28 of the 38 surgical cases and in 108 of the 160 cases in which definite information was available. In the surgical group one patient had had jaundice for eight months at the time of operation, but in no other case had jaundice been present for more than four weeks before operation.

TABLE 3.—Age, Sex, and Race Distribution of 173 Cases of Carcinoma of the Gallbladder

Age	Caucasoid		Mexican		Negro	
	Male	Female	Male	Female	Male	Female
21-30	..	1	..	..	..	..
31-40	..	..	1	4	..	1
41-50	3	3	2	9	..	..
51-60	9	16	1	11	1	2
61-70	13	27	1	10	..	2
71-80	17	21	1	3	..	1
81-90	5	6	..	1	1	..
Total	47	74	6	38	2	6

TABLE 4.—Incidence of the Most Common Symptoms and Signs in 173 Cases of Carcinoma of the Gallbladder

Symptom or Sign	Surgical Cases		All Cases		Percentage in Collective Review by Arminski ¹
	No.	Per Cent	No.	Per Cent	
Pain in abdomen	33	86.8	110	73.3	76.1
Weight loss	17	94.4	87	66.5	64.1
Nausea or vomiting	22	81.5	81	67.5	.....
Jaundice	28	73.7	108	67.5	57.7
Mass in right upper quadrant	18	58.1	76	55.9	53.2
Enlargement of liver	22	68.8	99	71.7	49.1
Tenderness	20	90.9	79	62.2	64.0
Ascites	0	0	27	20.1	20.8

Pain occurring at some time during the course of the disease was associated with jaundice in almost all cases. Painless jaundice occurred in only four of the surgical cases and in 18 of all cases.

Enlargement of the liver or a palpable mass in the upper abdomen was noted in well over half the cases. Frequently it was difficult to differentiate between a mass and an enlarged liver.

Laboratory and Roentgenographic Findings

Erythrocyte counts or hemoglobin determinations were made in 21 of the surgical cases. In eight there was no anemia; in five anemia was slight, and in seven moderate. Data available on 76 of the 135 cases in the autopsy series disclosed no anemia in 16, slight in 12, moderate in 32 and severe in 18. Most of the other laboratory studies were concerned with differential diagnosis of jaundice or evaluation of liver function. A wide range of results was recorded which do not seem statistically valuable in this study.

Because of the tendency of carcinoma of the gallbladder to destroy this organ and to form a large local mass centering about the gallbladder, and because of the frequent presence of gallstones, a high incidence of roentgenographically observable abnormalities would be expected. Cholecystograms made in 25 cases within a reasonably short time before operation or autopsy showed the gallbladder to be nonfunctioning in 24 cases and to contain stone in 8; in 2 cases examination was unsatisfactory but in no case were the findings reported as normal. In

most cases with nonfunctioning gallbladder the tumor involvement of the gallbladder was extensive, but in no case was the tumor visualized or outlined by roentgenographic appearance. A plain film of the gallbladder was made in 23 cases. In eight cases stones only were observed, in three cases a mass only, and in two both mass and stones. In ten cases no abnormality was visualized in the plain film, although at autopsy stones were found in eight cases and in several there were tumors large enough to extend beyond the gallbladder. In roentgenographic studies of the gastrointestinal tract abnormalities resulting from pressure or invasion by tumor were frequently observed. These were late findings but in some cases were helpful in diagnosis, while in others they were misinterpreted as indicating that the gastrointestinal tract was the site of the primary tumor. The change most frequently present was duodenal deformity; other frequent findings were abnormalities in the stomach and large bowel. Cholecystoduodenal fistula was observed in only one case.

In a number of the reports in the literature cases have been classified according to the dominant or composite clinical impression, a more graphic presentation than tabulation of symptoms and signs. The cases in this study have been considered in this way, by a classification modified from Boyce and McFetridge:³

- a. Cases with recent symptoms and signs of gallbladder disease, but with no evidence to suggest malignant disease 13
- b. Cases with past and recent symptoms and signs of gallbladder disease with no evidence to suggest malignant disease 11
- c. Cases with recent history of gallbladder disease and recent symptoms and signs of malignant disease..... 34
- d. Cases with past symptoms and signs of gallbladder disease and evidence of malignant disease..... 24
- e. Cases with evident malignant change and no symptoms or signs of gallbladder disease..... 47
- f. Cases with no evidence of malignant or gallbladder disease 14
- g. Cases with obstructive jaundice as principal clinical feature 17
 - Painless jaundice 8
 - With pain, usually in right upper quadrant, and often a mass..... 9
 (Jaundice was also present in 19 additional cases in Groups *a* and *d*.)
- h. Cases in which information was inadequate..... 13

Only 35 patients had a history of chronic gallbladder disease while 60 patients had no symptoms of gallbladder disease.

Clinical Diagnosis and Course

The clinical diagnoses made in the 38 cases in the surgical group were as follows: Cholecystitis or cholelithiasis, 10; obstructive jaundice, 10; carcinoma of the pancreas, 6; carcinoma, site not specified, 4; carcinoma of the bowel, 3; carcinoma of the gallbladder, 3; hepatitis, 2.

The most common diagnosis in the 135 cases in the autopsy group was that of intra-abdominal malignant disease, made in 75 cases—carcinoma of the stomach in 20, of the pancreas in 16, and of the gallbladder in 13.

The correct diagnosis was made before operation or autopsy in only 16 of the 173 cases, a proportion similar to that reported in the literature. There was no constant clinical pattern in these cases. There was a definite history of gallbladder disease in five cases and of painful jaundice and a palpable mass in several. Correct diagnosis was made before operation in three patients. One of them was a Negro woman 62 years of age who entered the hospital because of constant pain, a mass in the right flank, and loss of weight. She had had gallbladder drainage for stones three years previously. The second was an obese Mexican woman 60 years old who was admitted to the hospital in an attack of colicky pain in the right upper quadrant of the abdomen and a palpable mass; she had had chronic cholecystitis with intermittent colic for fifteen years. The third patient was a 73-year-old white woman who for a short time had had jaundice and pain in the area of the gallbladder, radiating to the shoulder, and a palpable firm mass in the right upper quadrant of the abdomen.

It is noteworthy that pain was present in five of the six surgical cases diagnosed before operation as carcinoma of the pancreas and in all ten cases diagnosed before operation as obstructive jaundice.

In the autopsy group symptoms preceded death by less than a year in 60 cases, and operation was attempted in only 20, in 14 of which the tumor was inoperable and death ensued within a year. In one patient extensive resection of the gallbladder, duodenum and colon was done; the patient died of postoperative shock and widespread metastases were found at autopsy. Cholecystectomy was done on four patients, two of whom died in the immediate postoperative period, one with metastases which were found at autopsy. The other two died of metastases in four weeks and in 17 months respectively.

The clinical course of the 38 surgical cases was equally poor:

Duration of Symptoms	Cases	Cases with Metastases Found at Operation
Less than 1 month.....	12	9
1 to 6 months.....	17	15
12 to 18 months.....	3	3
18 to 24 months.....	1	1
2 to 5 years.....	3	1
Unknown	2	0

The operative procedures done in these patients were: cholecystectomy (23); cholecystostomy and biopsy (2); exploration and biopsy (11); cholecystoduodenostomy and biopsy (1); cholecystogastrostomy and biopsy (1).

TABLE 5.—Incidence of Gallstones in 173 Cases of Carcinoma of the Gallbladder

Age	Number of Cases	Number with Gallstones	Per Cent with Gallstones	Location of Stones			
				Gallbladder	Cystic Duct	Hepatic Ducts	Common Bile Duct
21-30	1	1	100.0	1	0	0	0
31-40	6	4	66.6	4	0	0	1
41-50	17	13	76.4	13	1	0	0
51-60	40	34	85.0	33	4	0	4
61-70	53	44	83.0	42	5	1	8
71-80	43	33	76.7	30	2	0	8
81-90	13	9	69.2	9	1	0	1
Total	173	138	79.8	132	13	1	22

The known postoperative survival of this group was as follows:

Operative deaths	4 (3 with metastases)
Less than one month.....	6 (all died)
1 to 6 months.....	15 (all with metastases; 11 died)
6 months to 1 year.....	4 (3 with metastases; 2 died; 1 living and well, no further follow-up)
1 to 2 years.....	6 (5 with metastases; 3 died; 1 living and well, no further follow-up)
2 to 5 years.....	0
Over 5 years.....	1 (last seen Nov. 1951 5 years and 3 months after operation; had lost 30 pounds of weight, and has many cardiac and gastrointestinal complaints)
Over 10 years.....	1 (alive and well 12 years after operation)
Unknown.....	1

Thus of all patients followed all but three were dead or had recurrence within two years and only two were known to be alive after five years. One of these, the youngest in the group, was 24 years old at the time of operation and is in good health after twelve years. Her symptoms and the findings were those of acute cholecystitis and the tumor was found unexpectedly.

PATHOLOGICAL ANATOMY

Gross Pathology

There are several important components of the gross pathologic changes relative to carcinoma of the gallbladder. These are the appearance of the tumor itself, the changes produced in the gallbladder by the tumor or from preexisting disease, and the nature of the extension and metastases.

In almost all instances the disease was far advanced at the time of operation or autopsy. Examples of early lesions were rare. There were only eight cases in which the tumor was not observed until microscopic study was carried out; in those cases the growth was limited to the mucosa or wall of the gallbladder. Even in those cases, with one exception, the disease had already metastasized and later caused death. In a few instances the tumor was limited to one portion of the wall of the gallbladder,

producing a nodule, plaque or small polypoid tumor. In most instances the growth filled the lumen (except for stones) or replaced the wall, frequently with direct extension into adjacent structures, particularly the liver. Polypoid tumors occurred in only 21 of the 173 cases.

The tumor was grossly limited to the gallbladder in 62 cases, the gallbladder being shrunken and contracted in 23 cases, of normal size in 29, and distended or enlarged in 19.

Most frequently the gross appearance was that of wide local growth radiating from the gallbladder into the nearby organs, particularly the liver. Such a large local tumor was present in this series in 106 cases, in most of which the gallbladder was itself small or normal in size; it was enlarged or distended in only 12 cases. In 32 cases the gallbladder was destroyed by tumor; often only remnants remained within the mass, identifiable only by the cluster of stones frequently present. The formation of a large local mass was frequently detectable by physical examination and in some cases by roentgenographic studies.

Perforation occurred in nine cases. In six of them a fistula was formed to the gastrointestinal tract, and in three there was generalized peritonitis (bile peritonitis in one case). In two cases local abscesses were present.

The bile ducts were involved by direct extension in 81 cases (47 per cent), the common bile duct in 44 of these. In some cases the growth followed the bile ducts and could be distinguished from primary carcinoma of extrahepatic bile ducts only with difficulty if at all.

In addition to the local mass in the liver there were disseminated metastatic nodules in 80 cases. Regional lymph node metastases were described in 34 cases (49 per cent). Less frequently involved in metastases were the peritoneum (43 cases), the gastrointestinal tract (41), the pancreas (23), lungs (10), bones (6), kidneys (6), adrenal glands (6), the portal vein (6), the superior vena cava (2), ovaries (5), pleura (5), abdominal wall (3), diaphragm (3), spleen (2), pericardium (1), and myocardium (1).

The most common associated pathologic condition was gallstones, which occurred in 138 or 79.8 per cent of the cases (Table 5). Stones were also present in the bile ducts in 36 cases, in the common bile duct in 22. As the disease was usually in a late stage when observed and the organs diffusely infiltrated, it was difficult and often impossible to find gross evidence of preexisting cholecystitis. Hydrops or empyema of the gallbladder was present in only three cases.

Other associated diseases were abscess of the liver or suppurative cholangitis (five cases), double primary carcinoma (six cases—two of the prostate, two of the uterus, one of the colon, and one of the ovary) and diabetes (six cases).

There were only six cases in which carcinoma of the gallbladder was an incidental finding and not a major cause of death.

Microscopic Pathology

All the tumors in the series were adenocarcinomas. The histological types were as follows:

Simple glandular adenocarcinoma.....	110
Undifferentiated adenocarcinoma	24
Anaplastic carcinoma	19
Carcinoma simplex	5
Colloid (mucoid) carcinoma.....	5
Scirrhus carcinoma	4
Papillary carcinoma	2
Mixed types of adenocarcinoma.....	22
Mixed squamous and adenocarcinoma.....	6

There were no cases of pure squamous cell carcinoma in the series. The most common histologic type was simple glandular carcinoma infrequently having a slight resemblance to gallbladder epithelium. More often the cellular structure resembled that of carcinoma of the gastrointestinal tract. There were no early lesions which could be studied for histogenesis. In the few cases in which involvement could be observed only microscopically the tumor was fairly advanced. In two cases the appearance of the tumor was suggestive of carcinoma in situ; in both the tumor was in the mucosa and in the epithelium of the Rokitsansky-Aschoff sinuses. No epithelial metaplasia was seen in uninvolved epithelium.

In most cases the widespread tumor growth in the wall of the gallbladder had obliterated any evidence of preexisting chronic cholecystitis. However, in almost all cases where portions of wall were still present and uninvolved by tumor, chronic inflammatory changes including fibrosis were present.

**RELATIONSHIP TO CHRONIC CHOLECYSTITIS
AND CHOLELITHIASIS**

It is generally held that chronic cholecystitis precedes carcinoma of the gallbladder in most cases. There was little opportunity to study this relation-

ship in this series because the disease was advanced in most cases. However, in most instances where it could be studied there was evidence of chronic inflammation or fibrosis, although histogenesis and the preexistence of nonmalignant alterations in the epithelium could be observed in only a few cases. In two cases histological findings suggested adenoma malignum or carcinoma in situ. In many of the cases in which malignant growth was far advanced, areas of uninvolved mucosa could be found, and in these areas the epithelium was normal.

Cholelithiasis was present in 138 or 79.8 per cent of the 173 cases (Table 5). Arminski¹ reported an incidence of 73 per cent in his collective review of the literature. Most observers believe that the stones, like the inflammatory changes, antedate the tumors, and some have suggested that the stones are an important causative factor. This has led to attempts at production of carcinoma of the gallbladder in experimental animals, usually guinea pigs, by placing human gallstones and other substances within the gallbladder. Desforges and co-workers⁵ in a recent report indicated that the results, particularly with gallstones, were either negative or inconclusive.

It is well known that gallstones occur more frequently in females than in males. Data on age and race differences are not as abundant but in general the incidence increases with age in both sexes and is lower in the Negroid than in the Caucasoid races. Among persons with carcinoma of the gallbladder the incidence of stones is greater than in the general population and is also greater proportionately for males and for Negroid persons. This incidence suggests that if gallstone antedates the development of carcinoma it may be a predisposing factor, although it must be remembered that gallstones are quite common, particularly in older persons, while carcinoma of the gallbladder is rare.

If gallstones are in some way related to the development of carcinoma of the gallbladder, some parallelism in age, sex, and racial distribution of the two conditions might be expected, although this incidence may, of course, be purely coincidental, as in the increase of incidence with age. According to available statistics, as in the recent report of Lieber,⁹ the incidence of gallstones is highest in Caucasian females and lowest in Negro males. Similar variations are to be noted in data on carcinoma of the gallbladder. According to figures from the Los Angeles County Hospital for the period 1918 to 1937, the incidence of gallstones found at autopsy was 4.4 per cent, but no breakdown as to age, sex, race or fatal outcome is available for the period covered by this report. For the years 1934 through 1937, the incidence of gallstones in 3,153 autopsies on persons

over 10 years of age was 6.3 per cent. Distribution by race and sex was as follows:

Race	—Per Cent of All Autopsies—	
	Male	Female
Caucasoid	4.7	8.6
Mexican	3.8	9.8
Negroid	3.6	4.1

Although the incidence of gallstones is greater in females than in males, with the greatest sex difference in the Mexican race, there is only a slightly greater incidence of stones in Mexican females than in Caucasoid females. Among younger females, however, the racial difference is greater: In 19,908 autopsies the incidence of gallstones in Mexican females under 40 years of age was 29 per cent, while in Caucasoid women of the same age the incidence was only 8 per cent.

As previously mentioned, the very poor results of treatment for carcinoma of the gallbladder have led some observers to advocate prophylactic cholecystectomy in any patient who has gallstones, even if there are no symptoms. Others point out that gallstones are so common in middle age and later life and the incidence of carcinoma of the gallbladder so low that the operation would entail a greater risk than the disease. Some of the differences of opinion arise from variations in reported incidence of gallstone and, to a lesser extent, of carcinoma of the gallbladder, particularly in reports based on examination of surgical specimens.

It is of little or no value to quote statistics on average or total incidence of gallstones because of the wide variations in sex and race. Reports of large series of cases analyzed by age, sex, and race, as in the recent excellent report by Lieber,⁹ are needed. Comparable statistics on carcinoma of the gallbladder

are also needed but are difficult to obtain in large numbers. Additional studies of experimentally induced tumors of the gallbladder, as well as histological studies of early lesions, should also be of value in the problem of the relationship of cholelithiasis to carcinoma of the gallbladder.

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Does Your Hospital Need a Recovery Room?

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THE IDEA of a special room or ward in which patients can recover from operative anesthesia is not new but has recently been revived. The advantages claimed for a recovery room are that in the immediate postoperative period all patients who need it can have the care of specially trained nurses without delay; that equipment and supplies needed in such care are readily available in one area and need not be duplicated elsewhere; that more patients can be operated upon and released the same day, after recovery; that emergency operations can be done at any hour without disturbance to patients or routine in other wards; that ward nurses would be relieved of the care of patients at the time when nurses are busiest and the patients need most attention, and that nurses caring for recovering patients need not be hampered by visitors to these patients or to others on the ward.

All who have had experience with a recovery room—surgeons, anesthetists and nurses—are enthusiastic about the results. There are problems, however in setting up a recovery room near the operating rooms in space already used for other purposes, and even in new construction the general idea of a recovery room must be applied in terms of probable need. To determine both the desirability of a recovery room and the particular needs which it would fill, a survey was made of surgical cases in a 220-bed hospital with seven to eight operating rooms which is in an urban area near Los Angeles. The object was to learn what patients would have been cared for postoperatively in a recovery room had one been available.

During the period of the survey there were 32 working days including six Saturday half-days. A total of 574 patients were operated upon. Of the total, 99 had operations for which recovery room care is not considered ordinarily necessary—cesarean section, adenotonsillectomy and outpatient treatment. Of those patients who might have been sent to a recovery room, 180 (38 per cent) were males and 295 (62 per cent) females.

To make possible a judgment as to which patients would have been sent to a recovery room, a chart was placed on each floor for recording of the recovery time and the condition of each of the 475 pa-

• In a survey made to estimate the need for a special room in which patients could recover from anesthesia after operation, it was found that of 475 cases in which this service might have been used, it would have been desirable in 296; that recovery room care would probably have relieved ward nurses of the duty of special care during their busiest hours; that recovery room care was indicated in a high percentage of cases in which certain anesthetics were employed, and that the need for recovery room care appeared to increase in proportion to the amount of pre-sedation given.

tients. The author then correlated the information on these charts with the nurses' other records. The conclusion was that 296 patients would have been sent to a recovery room; of these, 111 (37.5 per cent) were males and 185 (62.5 per cent) females, a proportion very close to that for all cases in the survey and one to be considered in the planning of this facility. The distribution on wards was as follows:

Type of Ward	Cases in Survey	"Recovery Room Cases"	
		No.	Per Cent
Medical	53	32	60.4
Pediatric	22	16	72.7
Neurosurgical	46	31	67.3
Surgical	354	217	61.0
	475	296	62.3

It might be noted here that had a recovery room been available the equipment, supplies and nursing services needed for the patients during recovery time would have been combined rather than distributed or duplicated through eight wards. Of these factors, of course, the most important is the service of specially trained nurses. Special nurses cared for 48 of the 296 "recovery room patients"; had these patients in fact been concentrated in a recovery room all would have been under the care of special nurses during the critical period.

One factor affecting both efficiency of nursing service and the care available for patients after operation is the time at which the patients arrive on the ward. This time was noted for all patients in the survey and the information was grouped for three periods in the day. The first period is before 11:30 a.m., the hour at which all nursing and aide person-

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nel are occupied in serving lunch. It is before this hour that floor nurses are busiest in discharging patients, making rounds with physicians, and helping with dressing trays and personal care of patients. The second period, from 11:30 to 1 p.m., is that in which nurses are either at lunch or helping with feeding problems. The third period is after 1 p.m.

Period	Patients Returned to Ward During Period	Patients Who Would Have Gone to Recovery Room	
		No.	Per Cent
Before 11:30 a.m.....	265	159	60.0
11:30 to 1 p.m.....	120	82	68.3
After 1 p.m.....	90	55	62.3
	475	296	62.4

It is observed from these figures that the greatest number of patients arrived during the period in which routine duties are heaviest and that of those arriving during the lunch period the greater proportion would have gone to a recovery room had there been one. It is to be noted that the recovery time for some patients arriving before 11:30 a.m. extended well beyond that time. Average recovery time for "recovery room patients" was 1 hour and 45 minutes.

Several factors were studied which might aid in establishing indications for sending patients to a recovery room. One of these was the kind of anesthetic used. The following list shows the percentage of "recovery room patients" among those receiving one of the seven anesthetics most commonly used in the cases in the survey (excluding local anesthetics):

Anesthetic	Number of Cases in Which Used	"Recovery Room Patients"	
		Number	Per Cent
Pentothal-spinal	89	53	60
Pentothal-curare-gas-oral tracheal	76	73	96
Pentothal-gas	65	48	74
Pentothal-curare-gas	54	48	89
Spinal	46	2	4
Pentothal	45	27	60
Pentothal-spinal-gas	20	14	70

That pre-sedation affects recovery time is indicated by the facts that of 22 patients who were not given pre-sedation, only eight or 36 per cent would have been sent to a recovery room; of 59 patients given light pre-sedation, 32 or 54 per cent; moderate (258 cases), 162 patients or 63 per cent; and heavy (136 cases), 94 patients or 70 per cent.

NOTE: Since the presentation of this paper a new and extensive review and bibliography has been published. The author will be happy to help anyone interested in a review of a hospital in determining its need for a recovery ward.
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Discussion by WILLIAM H. MORAN, M.D., La Canada

Dr. McIntosh has, I believe, clearly demonstrated in his analytical study the importance of a postoperative area, whether it be a room, a ward, or a concentration of patients on a floor or in a hospital wing. The value of such a service to the patient, the hospital, the surgeon, and the anesthesiologist is evident from these statistics.

I would like to recount, briefly, my own experience. Nine years ago in an Army general hospital of 3,000 beds, the anesthesia service was confronted with an alarming increase in postoperative complications. At one time there were 11 cases of atelectasis in the surgical wards. These cases were occurring with all types of anesthesia, and in all types of surgery.

As in private hospitals today, we had a shortage of nurses. A recovery ward was placed immediately adjacent to the surgery. Both the nursing and enlisted personnel were given intensive training in the postoperative care of patients by members of the surgical service and the anesthesia service. All available equipment for treatment and prophylaxis was pooled in the recovery ward.

The incidence of surgical and anesthetic complications promptly dropped and remained within a normal rate during the next year. All surgical patients, except those receiving minor surgery with local anesthesia, were placed in this ward. All were removed to their respective surgical wards as soon as possible, after consultation between the surgical service and the anesthesia service.

Carcinoma of the Prostate

Diagnosis and Treatment

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CARCINOMA OF THE PROSTATE is the second most common cancer in men. In 1934 Arnold Rich,¹⁵ a young pathologist, announced in a now well known paper read at a clinical meeting of the American Urological Association in Baltimore, that the incidence of cancer of the prostate in men past the age of 70 was 28 per cent. This caused the audience, many in it approaching that age, to take heed. Rich went on with the reassurance that the majority of persons in that age bracket who had prostatic cancer did not die of it; in fact most such lesions were not even diagnosed clinically—just as Fate would later have it in the case of probably the most outstanding urologist of our times. Whereas previously the prostate had been too often ignored in routine autopsies, thereafter it drew the attention of many pathologists throughout the country, who corroborated Rich's revolutionary observation.

As a rule diagnosis of carcinoma of the prostate is not difficult when the lesion is in advanced stage. The early symptoms of cancer of the prostate cannot be differentiated from those of any other obstruction of the neck of the bladder. They are well known to all physicians: hesitancy, diminution in the size and force of the urinary stream, nocturia and dysuria. The disease is often asymptomatic, and the initial symptoms may be those caused by perineural and bony metastases: backache and pain radiating down one or both legs, accompanied frequently by edema at the ankles.

The most important step in the diagnosis of cancer of the prostate is the rectal examination. In the early stage the tumor is palpated as a nodule of third degree induration in an otherwise fairly homogeneous gland with a smooth capsule. Extension throughout the prostatic capsule, periprostatic tissues, seminal vesicles, the membranous urethra, and the bladder results in fixation of the gland so that it cannot be freely moved from side to side. The gland becomes very hard and irregular, much more so than with tuberculous or non-specific prostatitis. Stones in the prostate, when palpable, will often yield the sensation of crepitus and are frequently seen on x-ray examination.

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• About 28 per cent of men between the ages of 71 and 75 have cancer of the prostate. Many of them do not die of the disease, but with the life span ever increasing, this problem is becoming more important.

In the early stages the condition is asymptomatic; when the symptoms of urinary obstruction arise, the cancer is usually too advanced for cure. Cure depends on early diagnosis and, therefore, on routine rectal examination. The solitary hard nodule of early prostatic cancer becomes a stony hard fixed prostate as the condition progresses. X-ray and acid phosphatase studies are of help only after the cancer has metastasized. As many as 50 per cent of patients with rectally palpable early carcinoma of the prostate can be cured by radical perineal prostatectomy. Often, simple enucleation or transurethral resection is sufficient to effect cure in the case of occult carcinoma. However, some observers believe that when cancer is detected by microscopic examination of a prostate that has been removed, a radical operation should be done as soon after the initial operation as feasible. Early orchidectomy and estrogen therapy are of considerable help in slowing the process of advanced prostatic cancer and may postpone the need of transurethral resection to relieve obstruction. When these measures fail, bilateral adrenalectomy, cortisone therapy, pituitary irradiation, and pituitary extirpation have been employed, with moderate success, in an effort to diminish the androgen level.

In most cases the osseous metastasis of carcinoma of the prostate can be demonstrated in kidney-ureteral-bladder roentgenograms. Osteoblastic metastases and less commonly osteolytic metastases are most frequently found in the lumbar spine, pelvis and the neck of the femur. Later the ribs and other bones become involved. Paget's disease sometimes simulates the picture of bony metastases. An elevated alkaline phosphatase which is found in both conditions and simply indicates osteoblastic activity will ultimately drop after therapy with estrogens in the case

of carcinoma of the prostate, for estrogens have a beneficial effect on cancer but none in Paget's disease.

Despite the history, physical examination and x-ray studies, the diagnosis of carcinoma of the prostate may sometimes still be uncertain. Huggins^{5, 7, 8} in his classical work in 1941 demonstrated the co-existence of elevated acid phosphatase and carcinoma of the prostate after it had metastasized. Formalin-resistant acid phosphatase is an enzyme produced exclusively by adult epithelial cells of the prostate. With increase in the amount of prostatic tissue in the body, as by metastasis, there is often a concurrent rise in the acid phosphatase of the blood stream. However, since 1941 some of the enthusiasm for this test as a diagnostic aid for carcinoma of the prostate has been lost, for frequently in cases of extensive carcinoma of the prostate the acid phosphatase level is normal. It is significant, therefore, only when it is elevated, and then useful only to follow the activity of the cancer rather than to diagnose it.

The technique of Papanicolaou as applied to cell study of prostatic secretions for the detection of cancer¹ was originally heralded with enthusiasm. Malignant cells, especially those of the more differentiated prostatic cancers, are indistinguishable from normal cells and cells which have undergone metaplasia from infarcts and endocrine therapy.¹⁴ Most urologists have rejected this test in their armamentarium for the diagnosis of cancer of the prostate.

Biopsy is of considerable value in the diagnosis of early prostatic cancer. This can best be accomplished through perineal exposure, for early palpable lesions arise in the posterior lamella, which is beyond the operative range of the transurethral² or suprapubic approach. A frozen section is made at the time of exposure. It must be remembered, however, that frozen sections are notoriously unreliable, and if the operative exploration is strongly suggestive of cancer, even though the frozen sections may be reported negative, carrying out the radical operation is obligatory. Usually, however, when the frozen section is reported negative it is wiser to postpone the operation until the permanent sections are examined. The present technique of needle biopsy, which is a blind procedure, is of very little value, for the chances of securing a sample from the questionable area are slim indeed.

It must be concluded, therefore, that in early carcinoma of the prostate the most important single step is rectal examination. A clinician should be able to make the diagnosis of prostatic cancer in 90 per cent of cases. When there is doubt (it must be acknowledged that doubt sometimes arises in early cases) and in the absence of confirmatory evidence from the various diagnostic aids, the author believes

that watching the progress of the lesion over a period of two to three months without treatment is justified. If there is no regression or if there is an increase in the size of the lesion, perineal exposure and biopsy are mandatory.

Cancer of the prostate can be cured with the radical perineal or retropubic operation only when diagnosed early in its course.¹⁹ Unfortunately, usually by the time urologists observe the patients the condition has progressed to such a stage that only palliative treatment is possible. At the Brady Institute, Jewett⁹ found that of patients with extraprostatic extension of the cancer practically all who had a radical perineal operation had recurrence in six to nine years. Of those with no macroscopically detectable extension beyond the prostate, over half lived at least five years and many longer with no sign of recurrence; and the patients in this group who had recurrence in a shorter time had microscopically observable extension beyond the prostate at the time of the operation. The chance of cure, therefore, is greater if the fascia surrounding the seminal vesicles as well as the vesicles is removed. With radical perineal prostatectomy there is at least a 50 per cent chance of cure in early cases of carcinoma of the prostate.

There are certain very definite criteria for the selection of a patient for radical perineal prostatectomy.¹⁶ Certainly well less than 10 per cent of patients with cancer will meet all of the criteria. The patient's age should be such that his normal life expectancy irrespective of the cancer is greater than the expected survival with hormonal treatment. A man between 70 and 74 can expect to live seven to ten years. It is only an overzealous surgeon with a nebulous conception of his duties, therefore, who will subject a man older than 75 to the increased morbidity and mortality that go with radical perineal prostatectomy. Metastases and extension beyond the prostate, even if it shrinks with estrogens, are contraindications. The operative mortality for radical perineal prostatectomy in the best clinics is 3 to 5 per cent. Certainly the few instances of incontinence and stricture formation are a small price to pay for cure, but let no one be led to believe that the radical operation is as innocuous as simple prostatectomy.

Recently Westerborn¹⁸ of Sweden advocated cystectomy along with radical perineal prostatectomy and implantation of the ureters in the bowel. He performed a combined abdominal perineal extirpation. Whether this radical treatment is more efficacious in cancer cure remains to be seen.

If, because of the age and condition of the patient or the extent of the lesion, a radical operation is not feasible, palliative treatment should be instituted. The great majority of patients with cancer of the prostate fall into this category. Hormonal treatment

has definitely increased the longevity of most such patients. Nesbit and Baum¹² in an extensive survey in 1950 observed that patients who respond at all to hormonal therapy (and about 85 per cent do) survive longer and in greater comfort than those who do not obtain hormonal therapy. In the absence of metastases, a combination of orchidectomy and estrogen therapy had a statistically significant advantage over either therapy alone (see Table 1). In the presence of metastases, the combined therapy of orchidectomy and estrogens definitely prolonged the survival rate whereas estrogen therapy alone had little advantage over the untreated group (see Table 2).

Urologists are still at variance as to the optimum time for orchidectomy, some preferring to reserve it as a last weapon for the control of pain. Orchidectomy is far more valuable as an aid in arresting the growth of the neoplasm than as a pain-killer and should, therefore, be performed as soon as the diagnosis of cancer of the prostate is made. Not infrequently endocrine treatment alone will cause enough shrinkage of the prostatic cancer to relieve obstruction of the neck of the bladder and thus obviate the need for a transurethral resection for an appreciable period.

The problem of endocrine therapy is by no means simple or completely understood. From Huggins' and Deming's experimental work (and from personal observation) it is known that female sex hormones usually benefit and male sex hormones usually aggravate prostatic cancer. It has been observed clinically that after a variable period of time the beneficial effects of orchidectomy and estrogen therapy seem to diminish. Paralleling these findings, it has been found that the 17-ketosteroids in the urine, which represent a part of the end metabolites of the androgenic steroids elaborated by the adrenal glands and the testes, diminish after orchidectomy. Later there is an increase of the 17-ketosteroids for prolonged periods, which is attributed to stimulation of the adrenal androgens by the pituitary. Adrenalectomy or cortisone therapy causes a secondary fall in the 17-ketosteroids. Actually it has been demonstrated histologically that atrophy of the adrenal occurs with cortisone therapy, whereas corticotropin (ACTH) causes adrenal hypertrophy. Elimination of adrenal androgen activity can thus be accomplished in various ways. Huggins attempted bilateral adrenalectomy^{4, 6} in 1945 but, lacking replacement therapy, could not keep the patients alive. Today, however, this operation is carried out with a considerable degree of success by use of hormones influencing electrolyte balance and carbohydrate metabolism—desoxycorticosterone acetate and cortisone. Whether adrenalectomy will appreciably prolong the lives of patients with cancer who survive the operation remains to be seen. Cortisone has been

TABLE 1.—Five-year Survival of 597 Patients with Prostatic Cancer Without Metastases*

	Number	Per Cent Survived
Control	273	10.0
Treatment:		
Diethylstilbestrol	63	29.0
Orchidectomy	183	31.2
Diethylstilbestrol and orchidectomy.....	78	43.6

* After survey of Nesbit and Baum.

TABLE 2.—Five-Year Survival of 494 Patients with Prostatic Cancer with Metastases*

	Number	Per Cent Survived
Control	231	6.0
Treatment:		
Diethylstilbestrol	52	9.7
Orchidectomy	176	21.6
Diethylstilbestrol and orchidectomy.....	35	20.0

* After survey by Nesbit and Baum.

used with success to suppress the adrenal androgens in the adrenogenital syndrome. This occurs by inhibiting the intrinsic adrenocorticotrophic hormone of the pituitary. Investigators throughout the country are working with this theory in advanced cancer of the prostate. Scott in Baltimore has gone one step further with pituitary extirpation. Preliminary reports, however, are not too encouraging. Pituitary irradiation¹¹ seems more feasible, but the technique and the time relationship to orchidectomy and estrogen therapy have not been fully worked out. Thus at present there are four methods of reducing the adrenal androgen activity: bilateral adrenalectomy, cortisone therapy, pituitary extirpation, and pituitary irradiation.

The question of estrogen therapy and dosage is closely allied with the foregoing. In experiments on animals it has been noted that hyperplasia of the adrenal glands occurs with estrogen therapy. Smith and co-workers¹⁷ reported that TACE (chlorotriani-sene), a synthetic estrogen, causes a minimum of adrenal hyperplasia, and for that reason use of that hormone has been advocated. It may be that large doses of estrogens cause an excess of intrinsic adrenocorticotrophic hormone and thus increase the androgenic activity of the adrenal glands. Repeated 17-ketosteroid determinations for each patient with prostatic cancer may provide a gauge as to optimal estrogen dose at all times. Perhaps a combination of orchidectomy, estrogens, and cortisone to depress the adrenal androgens may turn out to be the palliative treatment of choice.

Bilateral adrenalectomy and pituitary irradiation and extirpation have not yet reached the point where they are feasible clinically. Mention should be made, however, of the sometimes beneficial effects of deep

x-ray to the bones when hormonal therapy does not control the pain from bony metastases.

A problem in connection with operations upon the prostate is that of occult carcinoma—clinically unsuspected and not detected until examination of microscopic section following simple prostatectomy reveals cancer within the adenoma. Kahler¹⁰ and Moore took exception to the old idea that prostatic cancer practically always arises in the false capsule; they noted that in almost 50 per cent of cases the lesion arose in the lateral lobes and later spread to the posterior lobe. This may be the reason for Thompson's and Nesbit's¹³ success with simple prostatectomy in occult carcinoma. However, the author is inclined to agree with Hinman³ and Leadbetter who expressed the opinion that radical perineal prostatectomy should be carried out. There are yet no statistically significant data to determine which treatment should be employed in occult cancer of the prostate.

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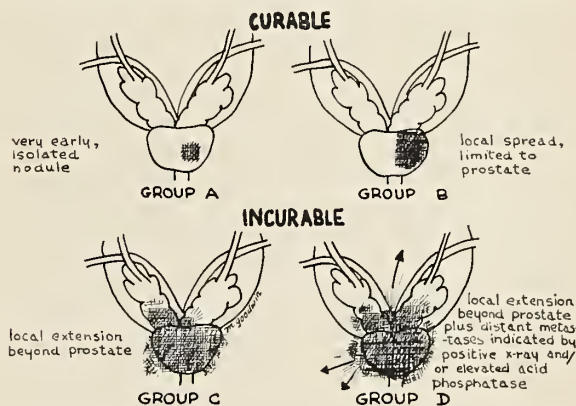
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Discussion by WILLARD E. GOODWIN, M.D., Los Angeles

Dr. Presti is to be commended for a scholarly review and synthesis of present knowledge concerning prostatic cancer.

I should like to emphasize the most important point he has made. Early prostatic cancer, like any other early neoplasm, is curable. In evaluation of patients it is important to perform a careful rectal examination and to attempt to discover



patients with early cancers (see groups A and B, in illustration). This clinical suspicion can and should be confirmed by biopsy. When rectal examination and biopsy prove the presence of curable prostatic cancer, radical prostatectomy should be done. When the patient is found to have incurable cancer (groups C or D) the treatment of choice (on the basis of available statistics) is prompt orchiectomy and estrogen therapy.

Controversial Problems in Adenotonsillectomy

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THE REMOVAL of tonsils and adenoids, the most frequently performed operation, has been undergoing considerable criticism from many quarters in the past few years. Much of the unfavorable comment has come from physicians who believe it may cause psychic damage or increase the hazard of bulbar poliomyelitis. Some disfavor originates because of an assumption that the tonsils and adenoids have a value in the establishment and maintenance of an immunity to upper respiratory infections. By misassociation of ideas in the mind of the public, brought about by the undesired publicity of this criticism, the operation has been given an undeserved black eye.

Persons who are not physicians have a great tendency to accept any medical remark as gospel. Controversy, unfortunately, is too often brought to their attention. They become aware of the arguments, which are so necessary to the profession, and are confused. They are fearful and do whatever they can to avoid an operation. Now and then needlessly severe repeated infections or permanent disabilities of the ears, nose, throat or jaws are suffered. At times, patients are driven to supposedly less dangerous, but actually more harmful therapeutic procedures, including electrodesiccation, tonsillotomy, or x-irradiation, any of which may well seal in infection.

INDICATIONS FOR ADENOTONSILLECTOMY

The purpose of this communication is to consider only the most controversial aspects of the problems confronting adenotonsillectomy today. There is little to substantiate theories that tonsillar function plays a part in blood formation or in the production of immunity. Since it is hardly conceivable that the tonsils or adenoids contribute essentially to hemato-poiesis, at least after the first year or so of life, this idea will not be discussed.

The proponents of the immunity concept suggest that the lymphoid elements comprising Waldeyer's ring tend to confine upper respiratory infection and perhaps confer immunity.²⁹

Bloomfield has pointed out the adequate natural protective functions of the nose, mouth, pharynx and lungs. The logic of his statements, in the author's opinion, fully refutes the advocates of the tonsil immunity theory. Bloomfield⁶ wrote that the natural

• It is doubtful that the tonsils or adenoids contribute sufficiently to immunity or to hemato-poiesis to warrant withholding adenotonsillectomy when there is need for the operation. Focal infection, rheumatic fever and allergic disease must be evaluated in the individual case. A seldom discussed reason for operation is the prophylaxis or treatment of malformation of the nose, sinuses, mouth and jaw. Well defined indications for adenotonsillectomy include frequent occurrence of infection, peritonsillar abscess, cervical lymph node disease believed caused by tonsillar infection, otitis media, and hypertrophy sufficient to embarrass swallowing or breathing. The operation may also be indicated in certain cases of impaired hearing, halitosis, or anorexia, and sometimes for carriers of diphtheria.

Psychic trauma can be obviated by proper preparation of a child for the operation he is to undergo.

There is a good deal of evidence of relationship between recent adenotonsillectomy and infection with poliomyelitis—and a good deal of evidence to the contrary. Nationwide rules cannot be established on the basis of the evidence presented thus far. Since in many cases it is unwise to put off adenotonsillectomy, each case in each community in each season must be evaluated separately.

design and function of the nose and pharynx is to prevent the lodgement of any foreign material or bacteria. By chance if bacteria were arrested in the tonsillar crypts, for example, infection might follow. The organisms if promptly eliminated, on the other hand, would be rendered harmless. He emphasized that the ability of the membranes to expel bacteria is one of the most important body defense mechanisms.

The great frequency of upper respiratory infection is evidence that any possible immunity is short-lived. The role of Waldeyer's ring appears, on this score, to be a poor contribution to the body's defense mechanism. Although it is questionable that the frequency of upper respiratory infection is diminished following adenotonsillectomy, the severity of infec-

tion is certainly lessened. The discomfort of a cold or sore throat is less after adenotonsillectomy, for the patient can breathe and can swallow more easily. When the tonsils and adenoids are a continuing source of infection, removing them must improve what is vaguely and commonly called "resistance." Quinsy, or peritonsillar abscess, is forever prevented.

Many children begin to blossom soon after adenotonsillectomy even though there was no indication before operation that infection was responsible for their failure to gain weight. Ashley² found a far greater gain of weight in 602 children who had had tonsillectomy than in 922 who had not.

Controversy over the relationship of the tonsils and adenoids to respiratory infection and to focal infection has continued over a long span of years. In perusal of 16 articles taken at random from the voluminous literature on the subject, it was noted that eight authors were in favor of tonsillectomy, three were in doubt, and five were opposed to the operation in consideration only of benefit in prevention or treatment of various types of infection.

Lower respiratory tract infection may be more frequent in persons who have had tonsillectomy, although statistics are difficult to obtain. Kaiser²⁶ followed the development of 4,400 children, half of whom had had the operation, for a period of ten years to adolescence. He felt that the removal of tonsils and adenoids lessened infection of the upper respiratory tract but that the effect with regard to lower respiratory infections was adverse. Kaiser found less middle ear infection in the children who had been operated upon but as much acute sinusitis, laryngitis, and nasal allergic disease in one group as in the other.

In another study, Kaiser²⁵ surveyed 48,000 school children, 20,000 of whom had undergone tonsillectomy an average of five years previously. Twelve hundred children who had signs of rheumatic fever, chorea, or heart disease were examined. Kaiser concluded that "the tonsillectomized child is assured greater protection against these infections than his companion whose tonsils have not been removed."

In a review of the indications for tonsillectomy and adenoidectomy, McFarland³¹ concluded that the effect of removal is beneficial in 80 per cent of cases.

Ashley⁴ found that time lost from school was the same for children who had had tonsillectomy as for those who had not. The weight gain was greater in those who had had the operation.

A great deal of the literature was reviewed by Cunningham.¹² She reported on a survey of 12,530 young white women who entered the University of California between 1920 and 1929. One-third had undergone tonsillectomy, one-third were thought to have pathologic abnormality of the tonsils, and one-third had normal tonsils. The results of the survey

made Cunningham question the value of the operation in the prophylaxis of infectious diseases and in the prevention or cure of such diseases as rheumatism, chorea, or carditis.

Boots and McCollom⁷ expressed belief that tonsillectomy may be of value in selected cases of rheumatoid arthritis, but not in certain other forms of arthritis.

A two-year postoperative study of 540 children by Epstein²⁹ convinced him that there was no correlation between the preoperative symptoms and result of the operation. Large tonsils were usually observed to be infected when studied histologically, but hyperemia of the pillars was not found to be significant. Good results were obtained in prevention of disease of the throat and fair results with regard to nasal disease.

Emenhiser¹³ stated that tonsillectomy is of no value in the therapy of disease that might be the result of a focus of infection. Coates and Gordon,⁸ on the other hand, urged careful analysis of each case to find those in which tonsillectomy might remove the source of infection. When chronic infection threatens to do more harm than the danger of operation, tonsillectomy is necessary, according to Shambaugh.³⁹

Allergic states have come to be recognized as commonplace within the last score of years. Although advances have been made in the therapy of such conditions, treatment is far from satisfactory. The relation of the tonsils and adenoids to allergic disease is a subject of controversy. Twelve investigators whose reports were consulted were evenly divided in opinion. Six stated that adenotonsillectomy was contraindicated in children with allergic disease. The other six expressed the belief that the indications for the operation are the same in allergic as in nonallergic children, but some of them advocated treatment of the allergic condition before operation.

A point apparently overlooked is that children with allergic disease affecting respiration need as open an airway as possible. If an adenoid mass is large enough to contribute to obstruction, removal is necessary; and the tonsils should be removed at the same time to obviate need for a secondary procedure. At the same time the nasal passages may be dilated by means of passing a firm endotracheal-type tube through the nares into the nasopharynx. The dilation not only compresses the turbinates with a minimum of trauma but produces a degree of tissue shock that in itself gives some measure of relief.

Apart from considerations relative to the factors of hematopoiesis, immunity and allergic disease, about which there is so wide a diversity of opinion, there are well defined causes for adenotonsillectomy. Among these are otitis media, occurrence of repeated moderate to severe infections even though there be no

peritonsillar abscess or enlargement of cervical lymph nodes, and hypertrophy sufficient to embarrass swallowing or breathing. It is difficult to decide, on the basis of size alone, whether operation should or should not be done. A small amount of adenoid tissue, for instance, may cause considerable pathologic change in the ears. In adults the matter of size is given more weight during examination, for usually the tonsils atrophy after the first or second decade of life unless stimulated by disease. Hyperemia of the pillars may be similarly difficult to judge. When the tonsils have undergone severe Vincent's infection or when they are a source of halitosis, removal is necessary. In some cases it has been possible to release carriers of diphtheria from quarantine after extirpation of the tonsils.

A less well known but equally important indication for adenoidectomy is the prevention or treatment of malformation of the nose, mouth, or jaws that has resulted from so-called adenoid facies. In persons who breathe through the mouth, the hard palate and upper dental arch may become narrowed owing to a lack of support by the mandible. The palate is not only narrowed so that there is not enough space for all the teeth, but elevated. The nasal space is thereby restricted and the growing nasal septum deflected, which further interferes with nasal breathing. Moreover, stimulus for growth of the mandible may be deficient and the orthodontic problem thereby compounded.

The rare but terrible catastrophe of malignant disease of the tonsil is obviated by tonsillectomy. The "five-year cure" rate for carcinoma of the tonsil is very low.

Definite contraindications to adenotonsillectomy include the presence of acute infection, blood dyscrasia, uncontrolled diabetes, and cardiac and renal disease until completely investigated. Proven cases of death from disturbance of the thymus by tonsillectomy are most rare, and it may be possible to prevent such occurrences by making preoperative studies of the response to cortisone or corticotropin (ACTH).

PSYCHIATRIC CONSIDERATIONS

The essence of the objections to tonsillectomy voiced by some psychiatrists^{5, 9} seems to be that the mental trauma of the operation, produced by the unusual and therefore frightening experience at an impressionable age, may be the foundation of a psychiatric problem that develops later. Responsibility for this situation is laid wholly at the door of surgeons who, not recognizing the possibility of psychic trauma, do not allay a child's anxiety by letting him know what to expect. In this psychiatric view, younger children should be heavily premedicated or

basally anesthetized as a means of prevention. Save for the recommendation regarding anesthesia, the foregoing is reasonable to otolaryngologists. (The dangers of basal anesthesia will be discussed later.) What has not been pointed out sufficiently is that tonsillectomy (or any other operation at an early age) is not the only hurdle a child must, of necessity, jump. Weaning, punishment by the parent, the initial visit to the barber shop, the first injury, and the first day of school also may be memorably unpleasant and could inflict mental scars. Usually they do not because the parent is ready to give guidance. Similarly, the parent, with the help of the physician, must prepare a child for an operation. Even younger children can be lightly premedicated and soothed. Tonsillectomy, then, need not cause lasting psychic trauma but can become rather another important stepping stone, an obstacle adequately understood and conquered, even useful in training a child's mind to meet the further problems needed for development. A surgeon's obligation lies not only in careful and adequate operation but also in the coaching of the parent and the child. Most surgeons of the author's acquaintance believe the time given to preoperative education is time well spent.

THE POLIOMYELITIS PROBLEM

Although the possibility of a relationship between poliomyelitis and tonsillectomy was first suggested by Sheppard's⁴⁰ report of the 1910 epidemic in Springfield, Mass., little interest was aroused until 1928 when the study of Aycock and Luther³ was published. Controversy over the issue has not become widespread until about the last decade. The reports by Krill,²⁸ and others, of the K family disaster of Akron, Ohio, were undoubtedly a stimulus.

Even in communities where the winter climate is not severe, upper respiratory tract infections are most frequent at that time of year, which would seem to indicate the summer months as the most propitious time for adenotonsillectomy. Yet the procedure often is postponed, even in cases in which it is much needed, owing to an almost universal voluntary ban on elective operations about the head during times when poliomyelitis is epidemic. This despite the fact that it has been difficult to establish criteria for an epidemic of poliomyelitis in localities where there are cases of the disease at all times of the year, even winter.

There have been numerous attempts to clarify the problem by statistical and experimental means. In a review of the available literature it seemed that there was about equal division between three opinions: (1) that there is a definite relationship between the operation and poliomyelitis; (2) that it is doubt-

ful there is such relationship or, if there is, the risk is small; (3) that there is no relationship between the operation and the incidence of poliomyelitis. Most of the articles expressing the latter opinion were of fairly recent date. The studies by which the three opinions were arrived at were based on a greatly variable number of cases, and several encompassed a review of the literature.

Cunning,^{10, 11} for example, under the auspices of the American Laryngological, Rhinological and Otolological Society, gathered data on 36,678 cases of poliomyelitis and 96,379 tonsillectomies. Of 35,039 patients who had had tonsillectomy during the years 1937 to 1949 and were followed for a two-month period postoperatively, only five contracted bulbar poliomyelitis. Faber¹⁷ criticized the statistical method used by Cunning and reported a different incidence using part of the same data.

Even in evaluation of seasonal and epidemic factors, agreement cannot be reached. Siegel,³⁸ and others, found that the evidence in support of a tonsillectomy-poliomyelitis relationship was stronger in non-epidemic years, and in the spring and fall. They were of the opinion, however, that winter was the safest period for the operation, considering only poliomyelitis. In the severe epidemic of southwestern Iowa in 1948-1949, Treyner⁴² discovered no connection between poliomyelitis and tonsillectomy. In Los Angeles County, Miller³² carefully compiled statistics on 1,229 cases of poliomyelitis in the severe epidemic of 1949. He found no reason to discontinue tonsillectomy in the summer months.

On the other hand, Goerke and Bower,²⁰ reporting on data on poliomyelitis in California from January 1948 to March 1949, in addition to some other cases presented in the same article, gave statistics implicating tonsillectomy in relation to bulbar poliomyelitis. Neither Stebbins⁴¹ nor Seydell^{36, 37} who studied severe summer epidemics during which time tonsillectomies were done could conclude definitely either that there was or was not relationship. McCormick³⁰ discovered a much higher incidence of poliomyelitis in persons whose diet was supplied by charity.

From statistics available, therefore, it cannot be said definitely that a relationship exists between poliomyelitis and tonsillectomy. One case of bulbar type poliomyelitis following tonsillectomy is sufficient cause for a pause for reflection, but stronger evidence is needed to prove a cause-and-effect relationship.

Ingalls and Aycock²⁴ reported upon a severe epidemic of poliomyelitis in a boys' school resembling in every way the epidemics in which tonsillectomy has been indicted. In that epidemic, however, adenotonsillectomy was not a factor and upper respiratory tract infection was thought to be a factor in susceptibility.

The solution to the problem may be found when it is discovered why clinical poliomyelitis, especially that of bulbar type, develops in the absence of any so-called inciting incidents such as tonsillectomy, dental extraction or inoculation. The very fact that so many things, some non-surgical, are suspected suggests an unknown factor. It would be worth while of course to prevent even one case, but does postponing inoculation or operation prevent any? And if risk there be, is it great enough to warrant postponing such procedures if there is great need for them? Why is poliomyelitis in many cases so mild that it is not clinically recognized? Experiments conducted by Sabin,^{33, 34} Faber,¹⁵⁻¹⁹ Schultz, Bodian and Howe,^{22, 23} von Magnus and Melnick,⁴² and their associates, have failed to answer these questions.

In cynomolgus monkeys clinical poliomyelitis can be readily produced by nasal instillation of the virus. With the nasal pathways blocked, the disease is not so easily induced through the intact mucosa of the mouth or pharynx. When the virus is injected into tonsillar or peritonsillar tissue of the monkeys, or fed to them soon after tonsillectomy, nearly all develop clinical poliomyelitis. If the virus is introduced into the pharynx and tonsillectomy done soon afterward, bulbar paralysis takes place. Clinical manifestations can be prevented, however, by swabbing the animal's throat with iodine a few minutes before the operation is performed.¹⁹

The virus has not been observed in tissues other than those of the nervous system, the tonsils, or the alimentary tract. The upper portion of the gastrointestinal tract is more vulnerable than the lower. The virus has been recovered from the stools and from the tonsils of patients with active cases and of asymptomatic carriers during epidemic periods many times. It has also been recovered from feces and from tonsils in interepidemic periods.²⁷ Immunity conferred by infection with one of the three types of poliomyelitis virus does not protect against the others.

The use of gamma globulin,^{4, 21} potassium and local antiseptics¹⁹ offer some promise in prophylaxis. In vitro, gamma globulin is capable of neutralizing all three kinds of poliomyelitis virus, provided the pooled human plasma from which it is prepared comes from a wide enough range of sources.

THE OPERATION

Basal anesthesia for children undergoing adenotonsillectomy has been revived by the use of sodium pentothal rectally^{1, 44, 45} in response to the warning against psychic shock. To the author, light premedication, induction with Vinethene® (divinyl ether) and then use of ether for anesthesia seems safer. Quick arousal lessens the danger of pulmonary com-

plications. It is not necessary to give heavy preliminary sedation to avoid psychic shock.

Although at the time of operation the indication may be much less for one than the other, usually adenoid tissue and the tonsils are removed at the same time in order to avoid possible necessity for another operation later. Modern anesthesia, asepsis, illumination and hemostasis have rendered mortality rates very low. These same advantages, however, making it possible for insufficiently trained surgeons to carry out the operation, may be a factor in the too high morbidity rate. The avoidance of complications demands exacting technique, familiarity with head illumination, and aptitude in securing hemostasis in a field not easily accessible.

Scarring of the palate, the leaving of tonsillar remnants, and removal of the pillars or uvula are undesirable but not noted readily by the patient. Poor results cannot be explained away, however, as inherent in the nature of the operation, or by implication that the tonsils "grew back." The nonencapsulated adenoid tissue may again hypertrophy, but at the time of operation, direct inspection of the nasopharynx by gentle retraction of the palate permits clean removal and the torus of each eustachian tube remains undisturbed.

Subsequent hypertrophy or hyperplasia of other components of Waldeyer's ring may be prevented by assiduous adenoidectomy and attention to the entire area at the time of operation. It is not necessary to be radical in order to be thorough. Radical procedures produce excessive scarring in this region. In a few cases, x-ray therapy may be required for shrinkage of tissue.

Following a properly performed adenotonsillectomy, there is minimal scarring, and the pillars, palate, and uvula remain intact. Painless, yet not overly long, sharp and blunt dissection, followed by snaring, is the method of choice. All of the tonsillar and adenoid tissue, but nothing else, should be removed. Should operative or postoperative hemorrhage occur, the surgeon alone should be able to control it immediately and completely.

With the new advances, the operation may be of benefit to younger patients, preferably three or four years of age. Severe infection, impaired hearing and malformations of the nose and mouth may be prevented. Age is not a contraindication in a child with impaired hearing caused by adenoid obstruction.³⁵ If such hearing defects are not adequately relieved by surgical treatment, excellent results usually are obtained by irradiation. In uncooperative children, x-ray therapy may do better for this purpose than the radium applicator, which must be precisely placed and maintained in place for many minutes.

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Anesthesia in Cardiac Operations

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ALMOST WITHOUT exception every drug administered in the production of anesthesia is a depressant of physiological functions, not only of the central nervous system but also of the cardiovascular system. How much poisoning can a patient tolerate and still survive? This is the primary problem faced by the anesthesiologist in the management of patients who are being operated upon. For successful solution of the problem, particularly as it is presented in connection with cardiac operations, it is essential that each member of the medical team involved—cardiologist, surgeon and anesthesiologist—have all knowledge possible about the status of the disease and the physiological reserve of the patient. Then, should emergency arise, valuable time need not be lost in discussion.

To accomplish the desired teamwork in the management of patients undergoing cardiac operations, the following approach has been developed at the Los Angeles County Hospital. First, the patient receives a complete diagnostic study in the cardiology department, including cardiac catheterization where indicated. The patient then is presented to a conference attended by the cardiologists, surgeons and anesthesiologists responsible for his care. At this conference the following decisions are made: (1) whether or not the patient is a suitable candidate for operation; if so, (2) which operation offers the best chance of improvement, and (3) when operation should be undertaken.

If the patient is a suitable candidate and is in optimal condition, the operation is scheduled for a definite date. The patient is then admitted to the hospital at least three days before operation to give time for final evaluation of his condition and for immediate preoperative preparation. Each member of the team examines the patient again during this preoperative period.

In the ten months following establishment of this regimen, 33 patients were operated upon, including 20 in whom mitral commissurotomy was done and

• *When the team of physicians—cardiologist, anesthesiologist and surgeon—who are to attend a patient during a cardiac operation study the patient together in preoperative evaluation, they are better able to anticipate emergencies that might arise during the procedure and to deal with them without loss of time for discussion.*

The principal problems of the anesthesiologist during operation are maintenance of adequate ventilation and oxygenation, maintenance of the lightest level of anesthesia possible (the minimum degree of poisoning), and maintenance of adequate circulation. The cardiologist must maintain constant observation of the heart rate and rhythm and be alert for early signs of myocardial oxygen deficiency.

there were no deaths during operation; there was only one fatality in the postoperative period (caused by cerebral thrombosis in a patient with tetralogy of Fallot), and there has been only one patient whose condition deteriorated so much during operation that the procedure had to be abandoned. The latter patient made uneventful recovery and will be operated upon again.

The formulation of the philosophy of management of these patients was based on the knowledge that each of the anesthetic and protective drugs that may be used is a depressant. Therefore, the number of drugs used and the dosage of each has been reduced to the minimum consistent with the successful completion of the operation. No drugs are used prophylactically. Procaine amide and quinidine are not administered preoperatively. A continuous procaine infusion is not used during anesthesia and operation. Procaine is not applied topically on the myocardium. The left auricular wall is not infiltrated with procaine prior to the placing of sutures. If, during operation, the use of these or other drugs is indicated, then and only then are they used. Drugs such as digitalis, which the patient may have been receiving on a maintenance basis, are continued as usual. By strictly limiting the number of drugs active in the patient at the time of operation a much more accurate evaluation of the cause or causes of any change in the patient's condition may be made. With

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this approach, rational therapy can be instituted as indicated when the need arises. Minute to minute information regarding the function of the patient's heart is obtained by continuous observation of a direct-writing electrocardiogram by the cardiologist member of the team. The function of the cardiologist is of utmost importance in the care of these patients during anesthesia and operation, for he can detect changes long before they become evident clinically, and appropriate therapy or corrective measures can be instituted earlier.

ANESTHETIC MANAGEMENT

The desired result of pre-anesthetic medication is tranquillity for the patient without depression of physiological compensatory mechanisms. This can be achieved in patients undergoing mitral commissurotomy, for example, with small doses of Demerol® (25 to 50 mg.) and scopolamine (0.3 mg.). However, it should be emphasized that the dosage is individualized for each patient. Scopolamine is used in preference to atropine for three reasons: (1) sedative and amnesic properties, (2) better drying of pharyngeal and tracheobronchial secretions, and (3) less pronounced vagal blockage. Demerol is used because, in comparable doses, it does not depress the circulatory and respiratory systems as much as morphine. Patients are not given barbiturates by mouth because these drugs may cause circulatory depression and the effects are unpredictable.

A smooth induction is mandatory for a patient who is to have a cardiac operation, since an excitement stage is equivalent to violent exercise. Quiet induction can be accomplished with 50 to 200 mg. of pentothal intravenously or with cyclopropane and oxygen. The patient is then anesthetized deeply enough with cyclopropane so that there is no "bucking" or reaction when an endotracheal airway is inserted. Inflation of a rubber cuff attached to the endotracheal airway provides an airtight tracheal seal.

From this point on, anesthesia is maintained with cyclopropane and oxygen or ether and oxygen. The authors wish to emphasize, however, their conviction that cyclopropane should be utilized in the management of these patients only by anesthesiologists who have had extensive experience with the use of this agent. Anesthesia should be as light as possible, consistent with smooth maintenance and the requirements of the operation. Remarkably small amounts of anesthetic agents are needed. For example, ordinarily only 10 to 30 cc. of ether is required for a two-hour mitral commissurotomy.

During the maintenance period the most important problems are:

1. Maintenance of adequate respiratory exchange in the presence of an open pneumothorax in a patient with a low respiratory reserve, whose position further embarrasses the function of the unopened side.

2. Maintenance of adequate circulation in patients with very low cardiac reserve, and the prevention of shock.

3. Control of arrhythmia, including tachycardia.

The first of these problems, adequate ventilation, is the direct responsibility of the anesthesiologist. A perfectly clear airway is a primary requisite. The effect of oxygen want on the myocardium becomes evident early. Reduction in oxygen supply is a most serious hazard and leads not only to malfunction of the myocardium but also to arrhythmia, which in turn decreases cardiac output. This leads to inadequate flow of blood through the coronary arteries and, in a vicious cycle, to the production of more myocardial ischemia. Adequate ventilation can be achieved by assisted respiration or controlled respiration according to the given need from moment to moment. Controlled respiration produces a quiet operation field which is especially important during anastomosis of blood vessels. It should be emphasized that the method of providing adequate ventilation is not particularly important so long as an adequate exchange of oxygen and carbon dioxide occurs.

Circulation should be maintained by adequate blood replacement as blood is lost. Keeping two intravenous portals open by a slow infusion is advisable so that, if needed, they are immediately available at all times for blood or drug therapy. Thus far since the inauguration of the previously outlined regimen for patients undergoing cardiac operations, need for use of vasopressors has not arisen, and such drugs are not used prophylactically. As would be expected, arterial blood pressure frequently becomes undetectable during the manipulation of the mitral valve, owing to mechanical obstruction of the flow of blood within the heart. This period is brief (a matter of seconds) and no therapy is required. Occasionally severe arrhythmia, precipitated by manipulation of the heart or pericardium, causes a fall in systolic blood pressure. Recovery is prompt following cessation or modification of the manipulation. In event of massive hemorrhage, an ever-present hazard, intra-arterial transfusion is certainly the method of choice for replacement. Shock did not occur in any of the 33 cases in the present series, owing to maintenance of the lightest possible anesthesia and replacement of blood loss at the time the loss occurred.

In order that arrhythmia may be noted immediately if it occurs, a continuously recording electro-

cardiogram is connected before induction of anesthesia and the tracing is observed continuously throughout the operation by the cardiologist, who immediately reports any significant change to the other members of the team. When change in rhythm occurs, the operation is temporarily halted, if necessary, until the cause has been ascertained and corrected. For example, if pressure on the heart by a rib-spreading retractor causes ventricular extrasystoles, the position of the retractor can be changed. In the present series arrhythmia that occurred from other than mechanical causes was controlled by *improving the ventilation* and inflating the collapsed lung while resting the patient. On only two occasions was the administration of procaine amide necessary for the control of persistent ventricular arrhythmia. In the authors' experience the incidence and severity of cardiac arrhythmia is no greater with cyclopropane than with ether.

Brief rest periods are given the patient periodically, especially just before the definitive part of

the operation. During these periods all operation ceases and the collapsed lung is inflated and kept inflated until the rest period is over.

Every effort is made to have the patient fully conscious at the end of the operation. The tracheobronchial tree is cleared before the endotracheal airway is removed. The systolic blood pressure should be within 10 to 20 mm. (mercury) of the pressure that is normal for the patient and the pulse rate should not be over 120 beats per minute. Respiration should not be depressed to any degree.

Postoperatively, the patient is followed closely by each member of the team. If complications develop, appropriate therapy as decided in consultation by the members of the team is carried out. The only serious postoperative complication in the present series was one of respiratory obstruction from tracheobronchial secretions compounded by an overdose of an analgesic drug. An emergency tracheotomy was necessary for removal of the secretions and the patient made uneventful recovery.

Transorbital Lobotomy

Its Use in Relapsing Psychotic States

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IN PRIVATE PSYCHIATRIC practice the authors have recommended the conventional radical prefrontal lobotomy only in cases of very refractory chronic mental illnesses. In a previous report¹ attention was called to some of the drawbacks, especially the prolonged period of rehabilitation. The use of so radical a procedure in affective disorders or psychoneuroses was questioned, and the opinion was expressed that the main use for the procedure was in the treatment of chronic schizophrenia.

Since the advent of the simplified technique of transorbital lobotomy and with it an increasing number of satisfactory clinical results with few complications, the authors have recommended the procedure in a variety of conditions and at a much earlier period in the patient's mental illness, as a preventive of permanent chronic mental illness.

The present communication concerns 25 cases in which transorbital lobotomy was performed on private patients from a general hospital psychiatric department. The experience differed somewhat from other reports of more chronic cases from state hospitals. However, all of the patients were so disabled and refractory to other kinds of therapy that commitment to a state hospital was imminent. Lobotomy was advised when there was poor prognosis for relief by further treatment of conventional type.

Freeman^{2,3} described the indications, technique and complications of transorbital lobotomy, emphasized the benefit in early schizophrenia, and recommended the treatment in cases of involutional depression that are resistant to electroshock or in which maintenance therapy is necessary. He pointed out that with the less extensive transorbital lobotomy there are fewer undesirable effects than with the standard procedure. In transorbital lobotomy areas 9 and 10 are undercut and only about a third as many frontothalamic fibers are sectioned as in the standard procedure. Hence there is better preservation of personality.

Well over 100 transorbital lobotomies were reported from 1946 to 1948. Jones and Shanklin⁴ reported that of 41 patients operated on in a state

• Twenty-five private patients were treated by transorbital lobotomy. The period of observation after operation was from six months to three years. In 14 cases of affective disorders in which there was not adequate response to shock therapy, nine patients made social recovery and maintained good health and four were improved. Some follow-up shock therapy was necessary for about one-fifth of the patients. Of eight schizophrenic patients four made excellent social recoveries, two improved and two were not improved. In three cases of obsessive compulsive states, results were not satisfactory.

In light of the factors of less disturbance to the total personality, absence of postoperative complications, shortened hospitalization, pecuniary savings and better clinical results, the authors prefer transorbital lobotomy to prefrontal lobotomy in private psychiatric practice and believe that in cases of frequent relapse early use of the procedure should be considered to prevent development of a chronic state.

hospital service, 16 were improved enough to warrant parole and 12 showed fair results but remained in the hospital. In a later report on 92 cases⁵ these investigators pointed out the great advantage of the procedure in selected cases of chronic involutional depression. More recently Moore, Hill and Lutz⁶ reported upon use of the operation in 102 patients, most of them schizophrenic, in a state hospital. Over-all improvement was noted in 88.2 per cent of patients and recovery in 29.4 per cent, all of whom had disease of paranoid and catatonic type. Stevenson and McCausland⁷ recommended prefrontal leucotomy to prevent recurring manic-depressive illness, for patients who relapse with electroshock or who cannot be carried on maintenance treatment. In a small series followed four years there were no recurrences.

Of the 25 patients in the present series, 14 had been observed for one to three years at the time of this report, and 11 for one year or less. Two were men, 23 women. The age range was 20 to 82 years.

From the A. E. Bennett Neuropsychiatric Research Foundation, Departments of Psychiatry, University of California and the Herrick Memorial Hospital, Berkeley. Presented before the Northern California Psychiatric Association December 5, 1951.

Two were past 60 and four were between 20 and 30 years of age. Diagnoses were as follows: Affective disorders, 14; schizophrenia, 8; obsessive compulsive neuroses, 3.

All of the patients had previously been treated by shock. Those with affective disorders had had repeated courses of electroshock in an average of four periods of hospitalization, but remission was not enduring. The schizophrenic patients had been given both electroshock and insulin shock treatment without lasting benefit and the average number of admittances to hospital in this group was five. The patients with obsessive compulsive psychoneuroses had been given psychotherapy, electroshock and subshock insulin treatments without success.

SURGICAL PROCEDURE

The transorbital technique used on these patient followed that described by Freeman.² In one case, that of a patient with advanced paranoid schizophrenia with auditory hallucinations, no improvement followed transorbital lobotomy, and radical lobotomy then was carried out, also without benefit.

Complications: One of the patients died of frontal lobe hemorrhage. At necropsy malignant growth, metastatic from a cancer of the breast for which mastectomy had been done previously, was noted. Third nerve palsy that lasted a few days occurred in another case. All other patients made uneventful prompt recovery from the operation and were well enough to leave the hospital in from two to four days after it was done.

Results: Results in the 25 cases are listed in Table 1.

The best results occurred in patients with affective disorders; nine of the 14 patients in the group were rated socially recovered and four as improved although two of them required further maintenance of electroshock therapy. In the schizophrenic group the best results were obtained in patients with the catatonic variety of the disease with affective admixtures of excitement or depression. The three patients with catatonic schizophrenia who were considered "socially recovered" required further postoperative electroshock therapy. One patient with chronic paranoid schizophrenia had no sustained improvement and no abatement of hallucination after orbital lobotomy or, later, after radical lobotomy.

The following reports are illustrative of the results obtained in cases of various types.

CASE 1: *Affective disorder, agitated depression.*

The patient, a woman 50 years of age, was admitted to the Herrick Memorial Hospital for the first time on December 18, 1949. A nurse for many years, she had never married and was living with two widowed sisters. The first onset of depression was in 1948, when the main content of the patient's thoughts centered around her "unforgivable sins"

TABLE 1.—Results of Transorbital Lobotomy in 25 Cases

Diagnosis	No. Patients	Result *		
		A	B	C
AFFECTIVE DISORDERS				
Manic-depressive	5	4	1	
Agitated depression	2	2		
Presenile depression	3	1	2	
Involutional melancholia	4†	2	1	
SCHIZOPHRENIC				
Catatonic	4	3		1
Paranoid	2		1	1
Mixed (schizoaffective)	3	1	1	1
OBSESSIVE COMPULSIVE	3		2	1
Total.....	26	13	8	4

*A—socially recovered—that is, with good adjustment at work or at home, without evidence of psychotic symptoms; B—improved and able to be with their families, but with residual manifestation of psychotic illness; C—unimproved, requiring institutional care.

†One died.

and the feeling that she was no good. All her preoccupations were directed to decreasing her self-esteem. A series of 14 electroshock treatments brought some improvement but the obsessive ideas continued. In February 1950 she again became depressed, agitated and self-depreciatory. At her second admittance, February 25, 1950, she had lost 40 pounds in weight. The patient was given 32 electroshock treatments and then maintenance electroshock every two weeks. Improvement was slight and relapses frequent. Transorbital lobotomy was performed August 5, 1950. Immediately pronounced mental and physical improvement occurred. After remaining at home the rest of the year the patient resumed nursing. At the time of report she had remained entirely well for 18 months.

CASE 2: *Schizoaffective catatonic, depressive and paranoid features.*

The patient, a woman 26 years of age, was admitted to hospital on January 22, 1951. Three days after the birth of her first baby (Jan. 11, 1951) she had returned to a home situation in which no outside help had been planned except for that of her mother-in-law. The baby would not nurse and cried almost constantly. The mother-in-law became very upset and the husband wished to take no responsibility. The patient wept and could not sleep because of worry about the baby. To her own mother, who was then summoned, she could talk only about her hospital experiences, her dislike of the doctor "who let her suffer" during the birth, her fears of the spinal puncture and the episiotomy. She worried about taking narcotics and becoming an addict. She felt that her baby was abnormal, that she was losing her mind, and that her body and mind were disconnected. She talked about the motion picture "Snake Pit" and begged her mother not to send her to such an institution.

The family physician referred her to a psychiatrist. In spite of her strong resistance, shock treatment was started in the office. Once when the patient was left in the room by herself, she slashed her wrists with a razor. She was then hospitalized.

On admittance the patient appeared tense, suspicious and very depressed, with much blocking. At times she was withdrawn, mute and catatonic; at other times she would become actively hostile, necessitating seclusion. She made several suicidal attempts. A series of 24 electroshock treatments was given, without sustained improvement, followed by 13 insulin coma shocks. Transorbital lobotomy was performed May 21, 1951. The change in the patient's behavior and attitude was immediate and dramatic. All paranoid features disappeared; mild anxiety remained for a time

and the patient felt insecure at home for a short period. At the time of report she was receiving electroshock treatment at monthly intervals and was carrying on all home responsibilities without difficulty. Her recovery was considered to be extremely good.

CASE 3: *Schizophrenia, paranoid type.*

A 60-year-old woman was admitted to hospital on October 20, 1950. In 1940 the patient had begun to worry about the menopause. Once she spoke about her nephew, who was involved in wartime maneuvers, and thought perhaps the government was after her because she had given out restricted information. Shortly thereafter she was unable to eat. Later the depression disappeared but she would talk to herself. In 1946 she began to imagine that people whom she had known from childhood were trying to do such things to her as spoiling her looks. She would shout aloud, and the neighbors complained that she shouted all the time her husband was away. She felt that the neighbors were against her. Nine electroshock treatments were given and there was slight improvement. The patient then refused further psychiatric treatment. Soon she again heard voices that she would answer in loud tones, and she became progressively worse. Transorbital lobotomy was performed October 23, 1950. The patient did not improve and the auditory hallucinations continued. On October 31, 1950, radical prefrontal lobotomy was performed, also without improvement. The patient was committed to a state hospital some months later.

CASE 4: *Obsessive compulsive neurosis, schizophrenic features.*

A man 20 years of age was admitted April 27, 1950. Compulsive habits had begun at age 14 when he repeatedly marked articles in his wardrobe and said that he suspected thefts. At age 16 he became extremely fussy about his haircuts and the style of combing his hair. Later he started pounding the steps with his foot several times before going up or down stairs, and he would also compulsively repeat such acts as going up or down stairs or closing the gate. He lost interest in his studies except for music. By Christmas of 1949 he was much worse, and would remain in bed until late in the afternoon listening to the radio. After getting up he would spend two hours or more in breathing exercises like blowing a paper against the wall and would use another two or three hours in the bathroom, washing himself and dousing his eyes with cold water. He would repeatedly manipulate his penis with a towel, paying no attention to his mother's observation. In February 1950 he had several interviews in a mental clinic but did not cooperate. In April he was admitted to Herrick Memorial Hospital, where transorbital lobotomy was performed on May 17, 1950. The patient showed fair improvement for a time, but gradually reverted to the old obsessive compulsive pattern. He was unable to make adequate social adjustment outside the home.

INDICATIONS FOR TRANSORBITAL LOBOTOMY

The authors consider the results obtained with this modified, less traumatic lobotomy procedure at least equal to and perhaps better than those obtained by the radical operation, and recommend its use relatively early in selected cases in which it appears mental disease may become chronic.

In affective states in which a reasonably adequate course of shock therapy has failed to bring sustained recovery or in which there is early or frequent relapse or lack of response to maintenance shock ther-

apy, transorbital lobotomy has given uniformly good results. In about a fifth of schizoaffective cases, some postoperative electroshock treatment has been necessary. However, fewer treatments are needed in order to hold the patient in good emotional control, and the treatments are more easily administered. Transorbital lobotomy also is recommended for schizophrenic patients who have not responded well to both insulin and electroshock and in whom either distinct affective components or aggressive paranoid symptoms are present. The authors agree with Stevenson and McCausland that prophylactic leukotomy offers the best hope for breaking the recurrent cycles of manic-depressive illness.

Pecuniary factors and emotional considerations in the family of the patient enter into decision between lobotomy and prolonged hospitalization and shock therapy. When the outlook is that of prolonged expense for treatment or of a decision for commitment to a state hospital, the authors discuss with the relatives the advisability of lobotomy. From the standpoint of private practice, transorbital lobotomy has considerable advantage over the more radical prefrontal operation. The radical procedure entails a long period of postoperative somnolence and apathy, and rehabilitation and nursing management are costly. Complications such as prolonged incontinence and organic epilepsy are not infrequent, and bulimia caused by posteriorly placed incisions occasionally occurs.

None of these problems occur in connection with transorbital incisions. There is less of the frontal lobe syndrome following transorbital operation. The less extensive operation brings about sufficient change, such as loss of self-consciousness and of anxiety and lessening of hostility, to produce the desired clinical results without the more pronounced tactlessness, lack of concern and indifference that follow the radical procedure.

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The Role of Psychotherapy in Allergy

Credits and Debits

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IN RECENT YEARS allergists, like all other specialists and general practitioners, have studied the relationship of psychotherapy to their specialty. Newspaper and magazine publicity on psychotherapy and its relation to allergic conditions has led to confusion in the minds of the public. Especially confused are patients with allergic disease who are being treated according to accepted procedures.

Dunbar's² review of the literature on psychosomatic interrelationships in bronchial asthma begins with the comment that it is a controversial subject. Certainly all allergists must agree on that point.

F. Reichmann in 1922 concluded that bronchial asthma is a neurosis of the respiratory tract, a part manifestation of a general psychopathic constitution. She stated that not the "what" but the "how" is the decisive factor in the treatment of asthmatic persons. Marcinowski in 1913 wrote that asthma is due to a "basic anxiety hysteria." Numerous other investigators call asthma a reflex neurosis, or secretory neurosis, or a central or bulbar neurosis.

E. Marx in 1923 disagreed with the conception that asthma is psychogenic. His conception was that, in predisposed persons, organic disease stimulates "spasm centers" and that, later, psychic stimuli may increase the tension in these centers to a sufficient degree for the tension to be discharged as spasms of the bronchial musculature.

E. Moos in 1923 wrote that the psyche is almost always the primary, most usual and most important factor in the production of asthma. He later (1928) used intensive psychotherapy on a number of patients and came to the conclusion that although allergenic substances may represent an increased stimulus for an attack, the psychic attitude can prevent, inhibit or favor an attack.

K. Hansen in 1930 wrote numerous articles on the subject. He concluded one of his papers as follows:

"1. I am inclined to refute the interpretation of asthma, the disease as well as the single attack, as a psychogenic effect in the sense of a primary immediate expression.

"2. The disease and at least the first attack are in every case anatomically and physiologically, i.e., or-

• Psychological problems play an important role in the production and exacerbation of allergic disease, just as they do in other illnesses, especially those of a chronic nature entailing economic and social problems. Some psychotherapy is implicit in the practice of all physicians. While most patients make satisfactory progress with whatever treatment is outlined, a few do not, and they may be helped if a little extra time is taken to investigate and rebalance their mental environment. In the treatment of patients with allergic disease, dealing with emotional problems is considered as adjunctive to specific desensitization.

ganically, determined, and not a form of psychogenic reaction.

"3. The single attacks may be precipitated, furthered or inhibited by psychic factors."

J. Naber (1929) wrote that he was of the opinion the precipitating factor in every attack is a psychic one, and on this basis all his patients were cured by psychotherapy without medication, change of climate, etc. He stated that a person may have asthma without a neurotic component, or it may be psychic without a somatic component. Most cases are doubly determined—that is, in a person with allergic predisposition, the psychic factors mobilize the latent factors of the disease and make it apparent.

Wittkower and Petow (1931-32) reviewed the literature and stated that the importance of the psyche in the precipitation of asthmatic attacks has been known for a long time. They continued that frequent conditioning of attacks by situation is often compatible with and explainable by allergic factors. Other aspects—for example, the precise fixing of the time of the attacks—cannot be explained in many asthmatic persons without resorting to the considerations of psychic mechanism.

Bierman and Stokes¹ reviewed approximately 80 articles in German, English and American literature on eczema, asthma, and hay fever. Most of the articles cited one or two cases as conclusive that the psyche is the most important consideration and that psychotherapy is the treatment of choice. In their review,

¹Presented before the Section on Allergy at the 81st Annual Session of the California Medical Association, Los Angeles, April 27-30, 1952.

which was essentially a plea for tolerance, cases were cited which seem ridiculous to the author of the present communication. Gillespie cited a case of fungous infection of the hands which cleared only after the adjustment of an unsatisfactory parental relationship. In another case, reported by Pearson, a patient with sweaty feet and dermatophytosis was cured by psychotherapy when he was relieved of fear of his parents.

Rogerson and Hardcastle⁶ reported upon a study of 25 children with allergic disease and concluded that nervousness was a prominent symptom. Personality difficulties and environmental stresses played an important role in the condition, in that all the children were "overprotected" by their parents. This "overprotection" resulted because the children, for some reason, were especially valued by the parents, or because the children were fundamentally unwanted. The authors stated that although the reasons seem opposed, the fault lies in the personality of the parents, whose insecurity and overanxiousness are reflected in the nervous child.

McDermott and Cobb⁴ made a study of 50 patients in the allergy clinic and medical wards of the Massachusetts General Hospital. They found that in 30 cases there was a strong emotional factor, in seven some emotional disturbance, and in 13 none. In 20 patients emotional stimulus was the precipitating factor in the first attack—very definitely so in ten cases. Emotional stimulus precipitated later attacks in 21 patients. These investigators expressed belief that if the emotion, such as hate or eroticism, is of sufficient intensity the patient secretes enough epinephrine to stop the asthma. (The author has never seen an attack of asthma terminated by intense emotion.)

In 1941 a *Psychosomatic Medicine* monograph was devoted to psychic factors in bronchial asthma. The work was done at the Chicago Institute for Psychoanalysis by French and Alexander with the collaboration of Dr. Ben Rappaport and 11 psychiatrists. Twenty-seven patients were studied, 16 adults and 11 children who were selected because of having both emotional conflicts and asthma. The findings therefore cannot be conclusive as to frequency and relative importance of emotional factors as compared to allergic factors. Patients were studied for from two weeks to 43 months.

The authors frankly admitted the speculative nature of their conclusions, which they summarized as follows:

1. The separation from the mother is the central emotional problem.
2. Asthma is related to the suppressed cry for the mother.

3. The mothers of asthmatic persons are often of the rejecting type.

4. Some mothers of asthmatic persons show pronounced pride in the early independence of the child.

5. Breathing of the newborn represents the first step toward a biological independence of the child from the mother.

6. Asthma often appears in early childhood.

7. The sexual impulse seems to be most significant in precipitating attacks.

8. Many asthmatic persons have difficulty in deciding to marry.

9. After allergic patients have succeeded in overcoming their emotional conflict regarding emancipation from the mother or mother figure, they become more resistant to allergens.

10. The threshold for allergic sensitivity is dependent on the emotional state of the patient.

The therapeutic result in the study by French and Alexander is difficult to evaluate, for at the time of reporting, some of the patients were still under treatment and others had not been observed over a sufficient period of time. Of 19 patients who were under treatment six months or more, nine were symptom-free and eight were improved. Those treated for a shorter period of time showed improvement.

French and Alexander³ discussed the observations of Siegfried Burnfeld of eight asthmatic children over a ten-year period. Burnfeld's conclusions as to the personality of the mother of the asthmatic child were quite in agreement with those reached by French and Alexander—that she is somewhat more critical of and less interested in her child than the "average" mother. At the same time she is observed to have a close bond with the child. She is more worrisome and tense than the average.

Part II of the monograph is a series of detailed case reports.

In a chapter on bronchial asthma in "Psychosomatic Medicine" by Weiss and English published in 1945, a chapter that is essentially a review of the monographs just mentioned plus a brief summary of the literature, Weiss concluded that attacks of asthma develop as a reaction to separation from the mother (or mother figure) and are comparable to the shrieking of a helpless newborn child. He interpreted this behavior of the newborn as a protest against separation from the mother and expressed belief that attacks of asthma are a recapitulation of this experience.

In a series of papers⁵ Hyman Miller, an allergist, and Dorothy Baruch, a psychologist, reported their attempts to coordinate medical treatment and psychotherapy. They concluded that maternal rejection is an important item in the emotional climate of an

allergic child's environment; that allergic symptoms can represent attempts to gain sympathy, express hostility and to mask a feeling of guilt or anxiety; and that the release of emotions in psychotherapy is paralleled by a decrease in symptoms.

To summarize: The literature stresses that attacks of asthma are associated with a variety of emotional conflicts. Asthma has been considered to be owing to:

1. Conversion hysteria; basic anxiety hysteria.
2. A reflex neurosis; a secretory neurosis; a central or bulbar neurosis; a compulsion neurosis.
3. A conditioned reflex mechanism.

4. Rejection by the mother. This last theory has, of recent years, received more publicity than any of the others. Since the public has been made more aware of psychiatry and psychiatric problems, the rejection-by-mother contention has caused much disturbance in families of allergic children.

It cannot be denied that rejection of a child by the mother or father or siblings, or of a husband or wife by the spouse, can occur. However, isn't it more sensible to consider the rejection as the result rather than as the cause of the allergic disease? The prolonged expense of medical care, making it necessary for other members of the family to sacrifice necessities or little luxuries; the extra work involved in preparing special diets; disturbed sleep caused by the crying or coughing, may all lead to resentment against the patient and eventually to rejection. The situation may be quite similar in any other prolonged illness such as diabetes, nephrosis, or malignant disease.

Much of the literature has been written by psychoanalysts. Even if psychoanalysis were to be proved and accepted as the therapeutic procedure in the treatment of allergic disease, particularly asthma, it would still be most impractical owing to the long period of time required and the prohibitive cost. Also there is the concept that any admission of a psychogenic problem is a social stigma, and many patients would resent being referred to a psychiatrist.

Probably most physicians agree that psychological problems play an important role in the production and exacerbation of medical difficulties, especially in medical problems of a chronic nature that entail economic and social problems. Common sense and a certain practical knowledge of life enable experienced physicians to comprehend the patient's personal problems in relation to his illness. Since a physician is in a position of influence and authority, what he says and does is important to the patient.

Some patients make satisfactory progress with whatever treatment a physician outlines. Some patients are so pliable and capable and have so much nervous stability that they come through the most uncomfortable illness and the most adverse situa-

tions undamaged. Some do not, and it is they who can be helped by a physician's taking a little extra time to investigate and rebalance their mental environment.

"The relative degree and significance of allergic and emotional factors should be determined and the patient treated accordingly," Wittkower⁷ said. "In some patients, emotional factors are of minor importance, in others they deserve serious consideration, and in still others they are all-important. Therefore, the physician should treat the patient and not his allergy alone."

For that reason sufficient time should be allowed for taking adequate history, including a life history. A few simple questions such as, "Are you happy?" or "Are you worried about anything?" often bring forth a great amount of information. There may be some physicians who feel they do not have sufficient psychologic understanding or training to give adequate care to patients with illness in which emotional disturbance plays a large part. However, such training is now available at a number of places.

The author does not have "psychotherapeutic sessions" apart from the regular desensitization treatment, but if a patient does not make satisfactory progress, he is invited to "talk things over." The patient is pleased with the extra attention, and it takes very little questioning as a rule to locate an emotional problem. By the next visit the patient usually decides to unburden himself completely. A few additional periods of consultation are usually sufficient.

Deep psychotherapy or analysis is necessary for a very small proportion of patients, the incidence being no greater in patients who have allergic disease than it is in any other patients.

The therapy of choice for all patients with allergic disease should be that method or combination of methods which will produce for the patient most effectively and economically the optimum in health and personal and social efficiency.

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Female Infertility

The Present Status of Treatment

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OF THE MANY WOMEN who consult a physician because of infertility, only a small proportion have important pelvic disease, and rarely do basal metabolic rate determinations, hormone assays, or other laboratory studies give a clue to any abnormality that would prevent pregnancy.

Many apparently normal women have one or more of the frequently encountered gynecological abnormalities such as endocervicitis and erosion, simple retroversion, fibroid formation, infantile uterus; but such conditions probably are not important factors in infertility. Some erosion or endocervicitis was noted in more than 60 per cent of several hundred women in routine examinations of the cervix in early pregnancy. Retroversion was also observed at the initial examination in about one case in five. Fibroid tumors are not uncommon. In the author's experience pregnancy seems to occur in an infantile uterus about as readily as in one of normal size.

Such abnormalities therefore may be looked upon as coexisting conditions rather than as causes of infertility, yet attention must be given to them in any general program of treatment of a patient who wishes to become pregnant.

After years of observation and study, the actual causes and the solution of barrenness in women who seem to have no abnormality sufficient to prevent pregnancy continue to be as much a mystery as ever. So far all that can be said is that pregnancy follows the use of some drugs and some instrumentations often enough to escape the label of coincidence.

Many drugs have been used, among them endocrine substances. Presumably, the glandular system governs ovulation, the quality of the ovum, the potential attractiveness of the ovum to spermatozoa and the preparation of the bed for implantation.

After long experience with attempts to overcome sterility by use of drugs most clinicians favor desiccated thyroid. Presumably it is a general glandular stimulant or tonic and should affect any or all of the phases mentioned. The prevailing practice is to increase the dosage to tolerance rather than to attempt to determine, on the basis of the basal metabolic rate, the amount needed in each case.

• Few barren women have gynecological abnormalities sufficient to prevent conception. Hormonal stimulation appears to be effective in some cases; and sometimes pregnancy follows instrumental treatment, possibly as a result of dislodgement or displacement of polyps in the process. There is nebulous evidence that psychogenic factors may play a part in infertility.

If the fallopian tubes are occluded, operation to restore patency is not likely to clear the way to conception.

If administration of desiccated thyroid is ineffective, attempt may be made to enhance the process of ovulation by giving the patient anterior pituitary products, although such substances if not entirely disappointing certainly are not as effective as, theoretically, they should be. Estrin and progestin, administered hypodermically or orally, have given as much encouragement if not more, even though theoretically they would seem to offer less.

Even though the patient keeps a careful basal temperature chart, often there is some question as to the time of ovulation. In that event cytologic study of vaginal secretion may be carried out or, more conclusive, endometrial biopsy.

A factor to be considered is the possibility of ovulatory depression followed by rebound stimulation by pituitary activity—that is, the parallel in women of the pattern observed by Heller in studies of spermatogenesis. It is not unusual for a woman to become pregnant a few months after she has discontinued all treatment in disgust.

The gonad-liver-pituitary syndrome and nutritional and liver therapy under investigation by Glass continues to look promising.

Results of various types of vitamin E and vitamin C therapy, after several years of routine use, are not such as to warrant use of the substances to promote fertility.

As there is known to be considerable fluctuation of the fertility index in males, it may be assumed that in females there is a similar variation even though there is no way to observe it as there is in

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males. Investigations of drugs are justified, therefore, even though there is no method of proving by direct observation what effect they have on fertility in women.

Many previously barren women became pregnant after instrumentation treatment of one kind or another—tubal insufflation, endometrial biopsy, dilatation and curettage, cauterization of the cervix, or a simple probing of the cervical canal. Various explanations have been given for these successes.

The most reasonable came from Holman, of Portland, who noted in hysterosalpingographic studies that a considerable proportion of patients had polyps at the internal os. Removal or displacement of polyps by instrumental treatment could very well remove some kind of mechanical barrier or change a biologic process that inhibited pregnancy. It seems reasonable to assume even though polyps are not present there still might be granulations that would have the same effect. Perhaps that is why in some cases the cervical canal bleeds so easily when probed.

Almost all physicians interested in fertility must now and again have occasion to meditate upon psychogenic factors. For example, the classic case of a man and wife who have had all known treatment without success and finally adopt a baby. Then soon afterward the wife may become pregnant. Statisticians are trying to prove such occurrences to be coincidence, but the arguments seem pretty thin. Physicians must wonder if there is not in such cases

a psychogenic barrier that yields when parenthood becomes a fact. Or does some glandular change take place? Perhaps some unknown response to a little baby completely dependent upon the couple who adopt him stimulates a more efficient gonadotropin than can be put into a tablet or a syringe. Pregnancy occurring at the "change of life" after long barrenness is hard to explain except on the basis of glandular change, and it must be wondered if perhaps the same change could have been achieved earlier by more efficient and tenacious management.

There is no way to demonstrate whether there is or is not biologic antagonism between the ova of one person and the sperms of one other. But there is reason for conjecture. It is not uncommon for a childless couple to divorce and then each have children with a new spouse. And what of sterility after the birth of one child? Could antagonism develop and replace the necessary attraction-force? Recently the author delivered a patient of her second child. Each was conceived by artificial insemination with donor semen. However, although three attempts were made to impregnate the woman the second time with semen from the same donor who had been used in the first insemination, conception did not occur. Semen from another donor then was used and pregnancy resulted.

If the fallopian tubes are occluded there is little likelihood that an operation to restore patency will clear the way to conception.

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Diaphragmatic Herniation Through the Space of Morgagni

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DIAPHRAGMATIC HERNIA is a general term denoting protrusion of viscera through an abnormal defect in the diaphragm. Such hernias are classified as congenital or acquired and traumatic. A hernia is regarded as congenital if present at birth or developing gradually after birth in a congenitally weak area. With few exceptions congenital diaphragmatic hernias have a peritoneal sac.^{5, 6, 8} Traumatic hernia results from a penetrating injury, from tearing of the diaphragm by violent abdominal or thoracic compression, or from necrosis secondary to an inflammatory process. It does not usually have a peritoneal sac.⁹

As normally formed, the diaphragm is a single dome-shaped muscle that divides the thoracic and abdominal cavities and is traversed only by the esophagus and the inferior vena cava. (The aorta passes posteriorly.) In adults the muscular portion is divided into three parts, sternal, lateral and lumbar, named according to origin, and all are inserted into the margin of the central tendon. The sternal portion consists of a few bundles of muscle arising from the xiphoid process. The muscular deficiencies on either side of the sternal portion, filled by areolar tissue, carry the superior epigastric vessels. These deficiencies are called the "spaces of Morgagni."

The occurrence of herniation of abdominal viscera through these foramina has been known for many years. Morgagni, the Italian anatomist, is credited with the first description of such a hernia, in 1769. It was observed in a patient who died of other causes at an advanced age and in whom herniation of intestine (without obstruction) into the thoracic cavity through such an opening was found at autopsy. No sign of injury to the diaphragm was noted.⁴

During embryonic development many changes occur simultaneously which account for the possibility of diaphragmatic hernias.^{3, 5} These changes consist of multicentric formation of the diaphragm and rotation of the gastrointestinal tract with a shift of the liver to the right and presence of hollow mobile viscera on the left side. The septum transversum de-

• In most cases diaphragmatic herniation through the space of Morgagni is asymptomatic and is first noted in routine roentgenograms of the chest. The diagnosis must be considered when shadows are seen in the anterior cardio-diaphragmatic angle. Lateral views are valuable in localizing the lesion. Simple procedures such as pneumoperitoneum should be used in differential diagnosis but when the diagnosis cannot be established by these simpler means exploratory thoracotomy is indicated, because of the possibility of carcinoma of the middle lobe of the lung.

If diagnosis is established, thoracotomy is indicated as an elective procedure for repair of the defect, which may have serious consequences.

Nine cases of diaphragmatic herniation through the space of Morgagni are summarized and a case report is included which illustrates the potential danger of this condition.

scends rapidly from the cervical region (phrenic nerve innervation) to occupy an anterolateral position; a mesodermal shelf, the "pleuroperitoneal membrane," descends with the septum transversum to occupy and close the posterolateral position of the diaphragm; and the dorsal mesentery forms the posterior and central portions which contain the esophageal opening.

When a hernia is acquired after birth it usually has a hernial sac and occurs most frequently at the esophageal hiatus, next often at the pleuroperitoneal hiatus (foramen of Bochdalek), and least often at the foramen of Morgagni. In the series collected by Hedblom (728 cases)⁶ and by Harrington (524 cases),⁹ only about 6 per cent of non-traumatic diaphragmatic hernias occurred at the foramen of Morgagni. True congenital hernia is of no higher incidence in one sex than in the other, but the acquired type occurs preponderantly in females. Acquired hernias probably develop because of increased intra-abdominal pressure as in pregnancy, labor, straining at stool, coughing or vomiting. Major contributing factors are weakening of the diaphrag-

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matic muscle and absorption of fatty deposit between the serous membranes.⁶

Acquired hernia is not to be confused with diaphragmatic eventration in which large areas of the diaphragm become weakened and elevated. Such irregularities of the diaphragmatic leaf are common and, unless quite pronounced, can be classified as within normal limits.

There is no characteristic symptom or syndrome of diaphragmatic hernia. Often hernia of the foramen of Morgagni is asymptomatic and is noted in a routine chest x-ray survey. Symptoms vary from mild respiratory distress to repeated attacks of intestinal obstruction, depending on what organs are displaced. If only omentum protrudes, the discomfort is usually minimal, in some cases no more than mild respiratory distress such as dyspnea or cough. Large hernias may lead to more severe respiratory symptoms, and in children may cause death from respiratory embarrassment.³ If the stomach or the small or large intestine protrudes there may be a wide range of symptoms including nausea, vomiting, sense of bloating or fullness after eating, epigastric pain or discomfort, abdominal distention and colicky pain. Such combined symptoms of respiratory and gastrointestinal disturbance frequently are confusing and lead to erroneous diagnosis. Harrington⁵ stated that the very protean nature of the symptoms is most characteristic of diaphragmatic hernia.

Failure to recognize and properly attribute symptoms of herniation through the space of Morgagni has serious potentialities. The literature contains reports of occasional cases of death from intestinal obstruction in all age groups.^{1, 3, 5, 6} The following case represents such a missed diagnosis:

CASE REPORT

A 50-year-old white man was admitted to hospital in October 1950 with the chief complaint of abdominal pain of 24 hours' duration. He stated that he had been in fairly good health until 5:00 p.m. the previous day, when he had sudden, severe pain high in the epigastrium, with continuous vomiting. The pain shifted to the periumbilical area and remained there. The patient had had intermittent sensation of bloating with belching and occasionally passed flatus.

On physical examination the patient was observed to be obese and of florid complexion; he sat erect in bed and obviously had abdominal distress. The temperature was 99.8° F., the pulse rate 100 and respirations 28 per minute. Blood pressure was 170 mm. of mercury at systole, 100 mm. at diastole. The abdomen was moderately distended; hyperresonance and tenderness in the lower epigastrium and umbilical area were noted, but there was no guarding, rigidity or rebound tenderness, and peristalsis was active. No masses were palpated.

Hemoglobin in the blood measured 15.4 gm. per 100 cc. and leukocytes 8,900 per cu. mm.—84 per cent polymorphonuclear cells and 16 per cent lymphocytes. The urine appeared to be normal.

The tentative diagnosis was subacute pancreatitis; and a

conservative regimen of fluids intravenously administered, penicillin, and Demerol® was begun. During the afternoon of the second hospital day further pain developed, most prominent in the right lower chest and more pronounced on respiration. The right lower chest was dull to percussion and breath sounds there were diminished. In a roentgenogram of the chest the diaphragm was observed to be elevated on the right side and there was a large area of decreased density beneath which there appeared to be localized gas. This condition was considered compatible with subphrenic abscess. Supportive therapy was continued but the patient's condition gradually and progressively deteriorated and he died on the ninth hospital day. No definite diagnosis had been made.

At autopsy the right side of the thoracic cavity was found to be filled by herniated gangrenous perforated ascending and transverse colon strangulated and obstructed at the foramen of Morgagni.

The diagnosis of diaphragmatic herniation through the space of Morgagni can be suspected if a lateral roentgenogram of the chest shows shadows of the lower lung field at the cardiophrenic angle lying far forward and not entirely within the thorax. (The importance of lateral view x-ray films in localization of lesions of the chest cannot be overemphasized.) After a barium meal portions of the gastrointestinal tract may be seen within the hernia. It has been pointed out that an inverted "U"-shaped or "V"-shaped deformity of the transverse colon may indicate omental hernia.⁷ The advantage of pneumoperitoneum as an aid to diagnosis has been previously emphasized.¹⁰ This procedure will usually permit visualization of the hernial sac, but incarceration of omentum may in some cases prevent filling of the sac with air and lead to an erroneous interpretation.

A mass at the anterior cardiophrenic angle may be lipoma, lymphoma, teratoma, neurofibroma, pericardial cyst, tuberculoma, or a peripheral lesion of the lung, perhaps carcinoma of the middle lobe. Exploration should be considered early when diagnosis cannot be established by simple measures; a long period of observation of roentgenographic shadows is not consistent with modern medical standards.

The thoracic approach permits the best exposure of diaphragmatic hernia^{2, 11} and also facilitates examination of the entire contents of the hemithorax for undiagnosed lesions. A diaphragmatic defect can be enlarged if necessary to provide excellent exposure of the upper abdominal contents. Any adhesions of the herniation to thoracic contents can be readily separated under direct vision, and repair of the defect can be made with a minimum of tension on surrounding tissues. The upper abdominal approach may possibly be advantageous in bilateral herniation of Morgagni.

Of the nine cases of diaphragmatic herniation through the space of Morgagni in adults that are summarized in Table 1, six were repaired successfully with thoracotomy. In one of the other three cases operation was precluded because of advanced

TABLE 1.—*Diaphragmatic Herniation Through the Space of Morgagni*

Age	Sex	Symptoms	Diagnostic Procedures	Date of Operation	Hernial Contents	Remarks
41	F	Mild chronic cough	Routine chest x-ray; bronchoscopy and bronchograms negative	1-6-48	Omentum	Cough unchanged
48	F	Occasional shortness of breath	Routine chest x-ray; barium enema negative; bronchoscopy negative	3-24-48	Omentum	Markedly obese
50	M	Acute severe epigastric pain	Missed	None	Perforated obstructed transverse colon	No operation; diagnosis made at autopsy.
54	F	None	X-ray with pneumoperitoneum; bronchoscopy negative	None		Mistaken for middle lobe lesion. Advanced generalized arthritis prevented operation.
56	F	None	X-ray with pneumoperitoneum; routine chest x-ray	Refused		Operation refused.
24	M	Mild, life-time anterior chest discomfort, aggravated by deep breathing or food	Upper gastrointestinal series, barium enema, x-ray with pneumothorax and pneumoperitoneum: all negative	7-31-51	Omentum	Superficial wound sinus healed after two months.
44	F	None	Routine chest x-ray	9-10-51	Omentum	Vague discomfort, preoperatively disregarded, relieved.
52	F	None	Routine chest x-ray	10-16-51	Omentum	
38	F	Cough and mild lower chest pain, vague epigastric distress after meals	Routine chest x-ray	3-28-52	Omentum	

systemic disease, and in another operation was refused. In the third, reported above, the patient died before diagnosis was made. In all nine cases shadows were observed in the right cardiophrenic angle in routine x-ray films of the chest. Most of the patients had minimal or no symptoms. Herniation was suspected from conditions observed in fluoroscopic examination and x-ray films of the chest. Pneumoperitoneum was an important adjunct in diagnosis in the two cases in which operation was not done. The following case report is illustrative:

CASE REPORT

A 48-year-old white married woman was referred by a physician in March 1948 for study of a suspected tumor of the chest. Routine chest x-ray films had been made because of occasional shortness of breath and fatigability. The weight of the patient had increased from 180 to 200 pounds in a short time.

On physical examination she appeared to be in good health. Except for obesity no serious abnormalities were noted. On fluoroscopy and x-ray films of the chest a large mass, about 10 cm. in diameter, was observed at the anterior cardiophrenic angle. No abnormality was noted in roentgen study of the upper gastrointestinal tract.

Thoracotomy was done two weeks later. A portion of omentum was found in a large sac and was excised. A diaphragmatic defect of the space of Morgagni was repaired. Convalescence was uneventful.

SURGICAL MANAGEMENT

The authors prefer to use endotracheal anesthesia for the operation. The diaphragm is exposed through an anterolateral incision in the sixth intercostal interspace. Transpleurally the hernial sac and its contents can be well visualized. The contents are replaced into the abdomen and the defect closed with interrupted sutures. The chest is closed tight over a catheter which is withdrawn as the last suture is tied while the anesthetist exerts positive pressure to ensure complete expansion of the lung.

Postoperative care consists of prophylactic use of antibiotics, early ambulation and early feeding. Nasal oxygen is administered until the patient recovers from anesthesia. The patient may sit on the edge of the bed in the evening after operation and can usually be discharged from the hospital about the fifth postoperative day, when he is able to be up for meals and for lavatory purposes. Demand feeding seems to be advantageous, and as a full regular diet is usually taken by the second postoperative day, intravenous feeding is rarely indicated. Mild analgesia to control pain without depressing the cough reflex is important. A roentgenogram of the chest is routinely made before discharge from the hospital to check lung expansion and pleural effu-

sion. The cases here reported were not complicated by failure of lungs to expand or by collection of pleural fluid; if these occur thoracentesis may be done. The patient is allowed to return to his former duties within a month after operation.

The results of the operation have been satisfactory and without pleural complications or recurrence of hernia. Intercostal pain is largely prevented by the injection of xylocaine in oil along the intercostal nerves at operation. Patients usually have mild pulling sensations in the lower part of the chest for about two months postoperatively, but rarely is this severe enough to necessitate blocking of intercostal nerves.

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Questionable Compensation Claims

Principles of Special Examination

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THE LARGE MAJORITY of industrially incurred injuries are minor in nature, the employee returning to work fully recovered with no permanent disability. A certain number of industrially injured employees, however, continue as totally disabled much longer than the attending physician has estimated, or later present complaints and conditions not originally anticipated. In the treatment of such patients it is often necessary to obtain one or more complete medical evaluations to determine the relationship of a patient's complaints and disorders to the original injury and to understand the case from multiple standpoints. Such a reevaluation is called a special examination, and this examination is usually made by specialists in various fields. When a physician is asked by an insurance carrier to make a special examination on a questionable compensation claim, it is obvious that a conflict or problem has arisen, or there would be no need for such special examination. He should therefore know the point of contention, and obviously he should be conversant with all facts pertaining to the case from the time of injury up to the time of special examination.

Physicians have been accused of being "prima donnas," and there appears to be a certain amount of truth in that charge, for practically all physicians who treat industrially disabled persons consider themselves very well qualified to do so. Further, the large majority of physicians to whom patients are sent for special examinations consider themselves thoroughly equipped to render accurate opinions as to the status of questionable compensation claims. Having personally reviewed the reports of many examining specialists covering a large number of questionable compensation cases, the author does not agree that all physicians, by the very fact that they are specialists in their fields, are competent authorities in the evaluation of industrial injuries. Too often an industrially injured patient is regarded only as a patient, with no consideration of the many extraneous factors which might tend to perpetuate complaints.

The author has read many reports in which a history of an injury of long duration is no more than

• In deciding a disputed claim of disability arising from occupation, physicians should ascertain whether a patient's medical history has any bearing on the disability; they should attempt psychologic evaluation of the patient as it may reflect on the conditions they observe in physical examination; they should investigate symptoms complained of by the patient rather than accept them as prima facie evidence of disability; and they must have knowledge of the extent to which an injury can cause disability.

It is urged that standards of physical ability and disability, as well as of other physical factors which may affect compensation claims, be established by organized research.

15 or 20 typewritten lines. In many reports, too, there was no past medical history and therefore no indication as to whether such history might have a bearing upon the patient's present complaints. Rarely is a personal evaluation of the patient included in the report of the special examination and even more rarely is an opinion given of the patient from a psychologic standpoint, with an evaluation of the many stresses and strains, both family and economic, which might have an important bearing upon the case. An evaluation of the patient's ability to work, taking into consideration his complaints and disabilities, is omitted in many reports or, if given, does not indicate the type of work which the patient can perform or the date upon which he will be able to return to work. The physical examination is, as a rule, competently done, but at the point where the information obtained by interrogation and by examination must be evaluated, the special examiner often fails in his duty.

The special examiner of a questionable disability claim sits in much the same capacity as a judge in a trial. Evidence is presented, both through interrogation and through examination, which has a definite bearing upon the patient's continuing complaints. It is incumbent upon the examiner that he fairly weigh all the evidence and upon this evidence arrive at an exact conclusion.

It may be protested that medical science is an inexact science and therefore that it is asking the im-

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possible to suggest that a physician should arrive at an exact conclusion based upon examination. But is not the judge or jury at a trial, be it civil or criminal, forced to weigh the evidence pro and con and arrive at an exact conclusion? There is surely no more exact conclusion than the sentence of death, which is based entirely upon evidence presented and weighed. Physicians have too long hidden behind the defense that medicine is inexact and that therefore they should not be called upon ever to render a final and conclusive opinion unless allowed to protect themselves by including as an adjunct to that opinion many other medical possibilities.

It is quite possible that an examiner may err when attempting to arrive at an exact conclusion regarding a disability. Nonetheless, it is incumbent upon him to arrive at a conclusion, which it is his responsibility to substantiate. It is not the practice of insurance carriers to attempt to influence this conclusion in any way, but they are at an absolute loss to carry out their obligation in the care of the industrially injured without medical opinion. It naturally follows that if a medical opinion is ambiguous and full of loopholes it is of no value to the carrier, who rightfully wants to know whether a patient's continuing complaints are real, whether they are related to his original injury, whether the accident as described by the patient could have possibly produced the condition ascribed to it, and many other facts relating to the claim. Whether the conclusion is favorable to the carrier or to the patient should be of no importance to the examiner. The author has often heard the opinion expressed by claims agents for insurers that they would much rather see a report with a definite conclusion which "sticks them" than an ambiguous report and a loose conclusion which "lets them off the hook."

An example of deficiency in this regard was in the case of a man who received a minor injury at work but had a protracted period of temporary total disability based upon the complaint of pain in the neck. A special examination was carried out and the report based upon the examination was full and complete: In review of the history and in the physical examination it was clearly demonstrated, from a medical standpoint, that there was no basis in fact for the patient's continuing complaint and his continuing allegation that he could not work. But the concluding paragraph stated, "Of course it is possible that this patient may have some condition present which I have not been able to find by examination and therefore I would suggest that he be hospitalized and cervical traction instituted to determine whether this treatment will have any effect upon his complaints." Although the entire body of the report demonstrated clearly that in the examiner's mind the patient had no disorder and no rea-

son not to work, his last paragraph completely negated the entire report for insurance purposes and made it obligatory on the insurer to continue treatment and compensation payments in spite of the fact that no cause of disability was found.

RELATING SYMPTOMS TO CAUSE

Examiners of the industrially injured must become more medically suspicious and must not accept symptoms reported by the patient as *prima facie* evidence of the presence of disease or injury. Further, when a complaint is compatible with a finding of abnormality it must be demonstrated that the abnormal finding did arise from the stated injury. It is not sufficient to assume, because a patient gives a history of injury and presents complaints relative to an allegedly injured portion of his body and a pathologic condition is found there, that the condition must therefore have arisen as a result of occupation as contended by the patient.

An excellent example of the error in such *ipso facto* thinking in medicine was presented by Kirkpatrick.¹ He stated that when a person finds himself suddenly incapacitated he can usually recall some unimportant incident upon which to fix the blame for the condition. It is quite common for laymen to rely on the "must-have-been" diagnosis. In many instances the physician who first sees the patient unwittingly falls into the same kind of error in trying to arrive at a diagnosis and informs the patient that he "must have" bumped himself. Detailed questioning in cases connected with occupational disability seldom elicits any admission of prior symptoms of any kind, since the patient immediately senses the object of the questioning. Kirkpatrick pointed out that in a series of 100 cases (reported in 1928) in which gout was a factor, 88 per cent of the physicians who had previously examined and treated the patients had not recognized gout as the underlying cause of the complaint; in another series of 100 cases reported in 1946, nearly 50 per cent of the physicians had failed to recognize gout as a cause of disability. An acute attack of gout has its inception several days before the acute symptoms are evident. Therefore, gouty bursitis or peri-arthritis which is first noticed in the course of a person's usual work should not be considered industrially connected or aggravated. It is obvious that unless the examiner is medically suspicious during the conduct of a special examination a condition such as gout can be easily overlooked and the patient's complaints and abnormalities attributed to trauma arising from injury rather than from a disease process which has no relationship to occupation.

Certain errors in the evaluation of disability due to industrial injury result from a lack of standards

for measurement. For example, one of the most common procedures in the examination of the industrially injured is a determination of the patient's grasping power. Unfortunately there is little standardization either in the method of carrying out this study or in interpreting it. Nemethi² reported that in preemployment physical examination of 1,000 persons aged 18 to 65 years it was found that the difference in grasping power between the major and the minor hand was 5 per cent in men 25 to 30 years of age and 15 per cent in men aged 30 to 35 years, while in women the difference was 25 per cent. The tests were made with a standard spring gripping mechanism. Although there were several factors in the conduct of this study on which the author disagrees, such research is pointed in the right direction. It is generally assumed that the major hand has a grasping power of 10 per cent in excess of the minor hand. Nemethi's study indicates that this assumption may not be based upon fact. Some standard for estimation of grasping power is absolutely necessary for proper evaluation of injuries.

Medical examiners must have standards for injured as well as for normal hands. In one case, in which the entire injury was the loss of the thumb of the major hand at the distal joint, the grasping power of the major hand, as determined when the condition was considered static and ready for rating, was shown as 50 per cent of the grasping power of the minor hand. The examining physician did not possess a knowledge of values for injured hands; to him a decrease in grasping power of 50 per cent was compatible with the injury. To those who have made extensive examinations of grasping power, however, such a loss of gripping power is far greater than could be incurred by injury of that type.

Atrophy of the arm or the forearm, the thigh or the leg is often reported in medical examinations. As an example, if the circumference of the normal

and major right mid-arm is found to be 13 inches and the circumference of the injured left mid-arm is found to be 12 inches it is reported that atrophy has reduced the left arm by one inch. The author questions whether in such a case atrophy is really present or whether there is not in fact a normal difference in circumference between the opposite extremities. Such a difference, if it exists, apparently is not known, but the question seems worthy of investigation. It is suggested that the California Medical Association assume the responsibility, as it did in preparing the book "Evaluation of Industrial Disability," of determining a set of standards to assist in measurements of industrially injured patients. This would be a laborious task, but it would make for more accurate medical reporting.

Examining physicians must recognize their duty to consider only the medical aspects of each case, being totally impartial to both the patient's and the insurance carrier's interest. They must be careful, when a contention on the part of the patient is not medically justifiable, not to provide inadvertently the doubt upon which all benefits can be granted to the patient.

It is to be hoped that in the future the ambiguities seen so often in the past reports will be avoided and that examiners will have the courage to state their opinions honestly without placing in their reports substitute or contrary opinions merely to protect themselves in the event that they might be wrong. The physician ought never try to avoid the duty of making up his mind.

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CASE REPORTS

• New Therapy in a Case of Tetanus

New Therapy in a Case of Tetanus

A. G. BOWER, M.D., Los Angeles

A SIXTY-FOUR-YEAR-OLD well-nourished white man who weighed 195 pounds entered the hospital on June 21, 1952, complaining of inability to open his mouth. He stated that a splinter had entered the base of the left thumb seven days earlier and that bilateral stiffness of the jaw was first noted on June 20.

Upon physical examination symptoms typical of a mild case of tetanus were noted; the abdominal muscles were in a sustained spastic state and the jaws were locked. The wound of entrance was debrided. *Clostridium tetani* grew in a culture. Plasma electrolytes were in normal balance and the patient was given chloral hydrate for sedation for three days, then Resyl® was added. The following day, he could open his mouth, but later in the day tracheotomy was done to by-pass hypopharyngeal secretions accumulating because of laryngospasm. The following day the patient was breathing very much better and sedation was limited to diminished doses of Resyl. That evening a severe convulsion occurred and the dosage of Resyl was increased. The effect the following day, June 27, was dramatic. The abdomen was much relaxed and the patient could open his mouth quite wide fairly easily, but feeding through a Levine tube was continued. Contractions of variable severity continued through July 13, 1952 (see Table 1).

There was no bowel movement from June 21 to July 13. Numerous enemas were given, then magnesium sulfate was administered July 11, 12 and 13 and the patient had three movements at which semiformal or liquid stools were passed. The condition of the patient was much better from then on although insignificant muscular contraction occurred from time to time until July 21, after which he was convalescent. X-ray films of the vertebra showed compression fracture of the T 12 without symptoms.

During the period of hospitalization the leukocyte content of the blood varied from 8,800 to 15,000 per cu. mm., with polymorphonuclear cells predominating. On July 4, the urine showed only an occasional erythrocyte, although it was amber to light red in color. On July 7, one specimen caused moderate reduction of Benedict's solution.

The patient was discharged July 31, 1952, with no additional therapy prescribed.

COMMENT

If penicillin can reach the tetanus organism within the body, theoretically it should destroy it. Nevertheless, where the focus of infection is known and can be removed surgically, this should be done after afferent pathways between it and the central nervous system are blocked with injected antitoxin. While it is presumed that antitoxin can combine

only with circulating tetanus toxins not yet bound by nervous tissue, and that small doses should suffice, the author's practical experience (more than 30 years of observing numerous cases of clinical tetanus) has taught that patients do not recover unless they receive substantial doses of antitoxin, theory to the contrary notwithstanding. Patients with the disease rarely survive if doses less than 100,000 units are received. While the optimum dose of antitoxin must vary with the individual, in observation of several hundred cases, the author has noted that as a rule the dose should be not less than 120,000 units or more than 350,000 units, preferably given in the first 24 hours of treatment.

Skin testing for sensitivity to antitoxin affords reliable information only when the result is strongly positive; negative results are unreliable and may lead to a false sense of security. The intravenous blood pressure test appears to give the most reliable information of the various tests used. In this test 0.1 ml. of antitoxin is diluted in 10 ml. of normal saline (never dextrose) solution which then is slowly injected intravenously. The blood pressure is recorded before injection and every five minutes for 30 minutes thereafter; if it falls 20 mm. of mercury or more, the patient is sensitive, and he must be desensitized before receiving antitoxin. If haste is urgent, the patient may receive 20 mg. of heparin intravenously per kilogram of body weight,⁶ and then the antitoxin may be given at once without desensitizing; but after 18 hours, if antitoxin is to be given again, it is necessary to give heparin again. Naturally, heparin should not be used if there is danger of hemorrhage.

The classic theory of Meyer and Ransom,⁸ that the muscular rigidity in tetanus is owing solely to the poisonous effect of the tetanospasmin component of tetanus toxin upon the nerve centers within the central nervous system, appears to be no longer tenable, since Harvey^{3,4} found that the motor end apparatus itself is poisoned in localized tetanus. He postulated that this was caused by inactivation of cholinesterase which increased the acetylcholine, manifesting itself electrophysiologically by intermittent discharges at the end plate. Goepfert and Schaefer² found that the continuous muscular spasm resulting from these stimuli was the cause of opisthotonus, rigid abdomen, risus sardonicus, and trismus.

Thus, while patients require antitoxin to survive, this alone is insufficient to save life. Two additional procedures are indicated: sedation adequate to prevent death from severe convulsive seizures, and the maintenance of an unobstructed airway with an exchange of respiratory gases adequate to maintain life.

The problem of sedation in tetanus is a complex one. Until the advent of mephenesin (3-ortho-toloxyl-1,2-propanediol) and of the various standardized extracts and alkaloids of curare, sedation was purely symptomatic and was induced solely through the continuous and prolonged use of hypnotics, narcotics, or anesthetics—for example, chloral hydrate and barbiturates. These drugs first produce a depressive effect on the cerebral centers and then, depending upon the depth of narcosis, descend to lower cord levels through

From the Division of Communicable Diseases, Los Angeles County Hospital.

TABLE 1.—Medication of a Patient With Tetanus

Date in 1952	Chloral Hydrate in grains	Resyl					Antibiotics			Units of tetanus antitoxin
		Intravenous	Per cent Sol.	Intra-venous	Oral	Total	Penicillin in millions of units	Crystacillin in numbers of 300,000 unit injections	Chloramphenicol in mg.	
June 21.....	30	.....	..	.....	....	.....	5	..	.....	120,000*
June 21.....	.....	.....	..	.....	....	.....	.....	..	.....	40,000†
June 22.....	225	.....	..	.....	....	.....	10	..	.....	.....
June 23.....	270	.....	..	.....	....	.....	.....	..	.....	.....
June 24.....	240	.....	..	.....	....	.....	5	..	500	1,500*
June 25.....	60	500	5	25.0	....	25.0	.....	..	2,000	.....
June 26.....	90	600	5	30.0	....	30.0	.....	..	500	.....
June 27.....	120	640	5	32.0	....	32.0	2	..	.....	40,000*
June 28.....	250	10	5	.....	.....	.....	.....	..	.....	.....
June 28.....	.....	2,000	1	.....	.....	.....	.....	..	.....	.....
June 28.....	.....	290	3	.....	.....	.....	.....	..	.....	.....
June 28.....	.....	650	1½	32.4	....	32.4	2	..	.....	.....
June 29.....	180	1,750	1	.....	.....	.....	.....	..	.....	.....
June 29.....	.....	2,080	2	.....	.....	.....	.....	..	.....	.....
June 29.....	.....	190	3	64.8	....	64.8	2	..	.....	.....
June 30.....	190	1,400	1	.....	.....	.....	.....	..	.....	.....
June 30.....	.....	800	2	30.0	8	38.0	2	..	.....	1,500*
July 1.....	150	550	2	11.0	20	31.0	2	..	.....	.....
July 2.....	210	800	2	16.0	22	38.0	1	1	.....	.....
July 3.....	180	1,000	2	20.0	24	44.0	.....	5	.....	1,500*
July 4.....	210	1,125	2	22.5	24	46.5	.....	3	.....	.....
July 5.....	300	1,225	2	24.5	24	48.5	.....	4	.....	.....
July 6.....	300	800	2	16.0	24	40.0	.....	4	.....	1,500*
July 7.....	210	1,000	2	20.0	24	44.0	.....	5	.....	.....
July 8.....	330	850	2	19.5	.....	.....	.....	.....	.....	.....
July 8.....	.....	50	5	.....	24	43.5	.....	3	.....	.....
July 9.....	240	500	5	25.0	16	41.0	.....	4	.....	1,500*
July 10.....	300	550	5	27.5	18	45.5	.....	3	.....	.....
July 11.....	60	.....	..	.....	....	.....	5	2	.....	.....
Total.....	4,165	.....	..	416.2	228	644.2	36	10.2	3 grams	207,500 units

* Intramuscularly. † Intravenously.

* Intramuscularly. † Intravenously.

the thalamus and medulla. It is really at this last site, not the former, that the soothing or paralytic therapeutic effect upon the interneural fibers is specifically desired, and until mephenesin was available there was no drug that would produce it. During the stage of initial muscular rigidity, action currents are present in the resting muscle owing to central nervous system stimuli. However, later on these contracted (but not convulsing) muscles do not show action currents, thus representing the previously mentioned spastic states which take place without being influenced by stimuli arriving from the spinal cord, and which do not disappear until the nerve end-plates in the muscles either recover or degenerate and atrophy.

Thus, the continuous tonic rigidity of tetanus probably is caused by the effect of continuous minor stimuli to the muscles and their motor nerve end-plates, respectively. This is in contrast to the intermittent paroxysmal abnormal reflex muscular contractions or major convulsions arising from major motor stimuli that are attributable to a loss of inhibition of the interconnecting fibers of the intermediate neurones in the reflex arc, the so-called internuncial pool of nerve fibers within the spinal cord and medulla. There intermediate fibers permit a resultant and greatly enhanced, abnormal, gap-jumping, hyperirritability and motor response to sensory stimulation on their part.

Curare has been used to control this nerve-muscle end-plate involvement, but the author's clinical experience with curare has been disappointing, principally because there is no way known at present of telling when the paralyzing effect of the drug has passed: At one moment the patient's contractions are well-controlled, and the next he may die in severe convulsion.

The characteristic opisthotonic convulsion of non-sedated tetanus may result from any type of relatively insignificant sensory stimulus. It is exceedingly agonizing, and on x-ray examination, 20 per cent of all surviving patients are observed to have unsuspected fractures of the spine. If the respiratory muscles, including those of the hypopharynx and larynx, are involved in prolonged and severe convulsions, death commonly results from asphyxia. Retained secretions also cause pneumonia.

The sedative effect of drugs commonly used at present does not occur upon the cord until all functions of the cerebrum and the autonomic centers are first greatly diminished and the resulting deep narcosis has lowered blood pressure and diminished respiration. This unsatisfactory result is owing to aiming therapeutic bullets at the wrong target, and to using the wrong bullets. The paroxysmal reflex convulsions of tetanus which originate from sensory stimuli are a result of abnormal reflex response along the entire uninhibited abnormally excitable internuncial pathways to all the motor nerves. This abnormal response is owing to loss of inhibition and increased irritability of the intercommunicating or internuncial fibers in the cord and medulla, so that response of the motor component of the reflex is along all efferent pathways instead of just following its usual individual physiological channel. What is needed is a drug or drugs to break up this internuncial motor reflex linkage in the cord, from which a sensory stimulus results in a response of all the motor reflex arcs instead of just the physiologically normal individual one. The problem is to dampen and suppress the highly magnified nervous motor impulses originating in the cord as a result of this peculiar involvement of the internuncial fibers. Mephenesin accomplishes this.

However, when used in the dosages required for the control of tetanic convulsions, mephenesin causes trouble. It prolongs the phase of serum sickness over many days, and causes the concurrent appearance of maculopapular hemorrhagic rashes during that time. In addition, it increases the fragility of the erythrocytes, causing hemolysis, anemia, hemoglobinuria and, occasionally, death.

This led to a search for other drugs which would have the desired selective action upon the internuncial fibers instead of the cerebral centers, yet would not have toxic effects upon erythrocytes. One such was a preparation called Myocain. It had been used for this purpose by a group of Viennese physicians¹ in tetanus cases with most unusual results as follows: Mephenesin was used in 29 cases and the death rate was 4 per cent, while the death rate in a control group of 34 cases in which mephenesin was not used was 59 per cent. However, hemoglobinuria occurred in 11 of the patients who received mephenesin, and in 15 there was increased fragility of erythrocytes at the cessation of treatment. This led to using Myocain instead of mephenesin. In experiments with animals Myocain produced identical effects in its specific action upon the intercommunicating fibers of the cord, but without hemolytic side effects. Four patients with severe tetanus, all with an unfavorable prognosis, were given the drug. The paroxysms were controlled and all four recovered. Single doses given ranged from 1 gm. to 3 gm., given as a 2.5 per cent solution by continuous intravenous drip. The effect of a single dose was said to last three to 12 hours. The total dosage given in any 24 hours varied from 4 to 15 gm.

This report led the author to procure some Myocain from

its manufacturer, Dr. Holzinger of Vienna. Chemically, this substance is O-Methoxyphenylglycerol ether. A search in this country appeared to show that Resyl* had the same molecular structure. Accordingly, Resyl rather than Myocain was substituted for mephenesin. The case herein reported upon is believed to be the first case of tetanus in which Resyl was used, and the result obtained indicates further investigation of this drug.

ADDENDUM

Since this report was written, six additional patients treated with Resyl have had excellent symptomatic relief. The only untoward effect noted was a tendency to cause simulation of paralytic ileus owing to the relaxing effect.

*This product was supplied for trial by the Ciba Company.

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California MEDICINE

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EDITORIAL

The Proposed "Average Fee" Plan

THE SO-CALLED "AVERAGE FEE" PLAN brought before the meeting of the House of Delegates in December 1952 can be expected to receive wide attention at the coming meeting of that body. In the interval between meetings a systematic effort has been made by the California Medical Association and its component county societies to discuss the underlying reasoning which prompted a committee of 15 physicians working some 18 months to include this suggestion among the ten recommendations for changes in the structure of California Physicians' Service—"The Doctors' Own Plan."

Three of the ten recommendations have already been accepted. The first two place more responsibility on the California Medical Association for the operation of C.P.S. The House of Delegates for the C.M.A. is henceforward to be the same as for C.P.S. The C.M.A. Council similarly has now become a nominating committee for C.P.S. trustees.

The third recommendation already accepted is that the trustees of C.P.S. shall organize a medical care plan of *indemnity type*. A subsidiary recommendation to this one is the "average fee plan."

Any insurance plan to continue successfully must be on a sound actuarial basis. This may be accomplished by a per capita system or by a service or indemnity plan. The *per capita system*, widely used in England, may at first appear as the easiest means of attaining such a balance. This system is not unlike some "closed-panel" plans in our own country. The physician is paid so much per patient per year, sick or well. The evils of this kind of socialization and its tendency to make the less conscientious physicians give the "once over lightly" to so many patients per hour, are sufficiently understood by the profession to require no further consideration.

The *service plan* is the one under which the 11,000 physician members of C.P.S. now operate in caring

for patients with an annual personal income of less than \$3,600 or family income under \$4,200. The physician members bind themselves to accept a fixed fee schedule and agree to take a lesser percentage of this schedule if there is not enough in the "kitty" to pay the full unit value, as has often been true in the past.

Under the *indemnity type* coverage already in use by Blue Cross, and proposed for California Physicians' Service, the patient is paid by the insurance company. The doctor is then paid by the patient. This allows the patient to assume his usual role of paying the doctor, but the insurance company indemnifies the patient at least part way toward his medical and hospital expenses. *This is the arrangement which has been recommended and accepted.*

Now as to the "average fee for the average patient of the average physician" feature. An insurance company, when indemnifying a patient, must have some knowledge of the usual cost to it of a medical procedure or hospitalization. However, physicians vary widely in their ideas of the worth of their services. At present those who are loyal to C.P.S. remain members, and must not charge more than the fee schedule for those patients on the service plan. Those who do not feel the necessity for such loyalty resign from the plan and, therefore, automatically are on an indemnity basis.

The committee realized from the outset that fee schedules or compulsion of any kind is distasteful to all doctors. It is well-nigh impossible to arrange a schedule, for example, which will at the same time be fair to the recent graduate and the long-experienced practitioner of unusual attainments. County-wide "average fee" schedules are not entirely new, having already been adopted independently by some county societies on their own initiative. Industrial accident fees and those paid by Blue Cross and some

insurance companies have been with us for almost a generation.

By way of solving the insoluble, therefore, under the proposed plan any physician will be permitted to deviate from any state or county-wide fee schedule, so long as *the patient knows about it in advance*. Thus a physician may set up his own schedule, or have none at all for that matter. This basic independence permitting him to set his own fees has been considered a "must" by the independent American physician.

Most physicians have a fairly well fixed schedule of charges for procedures, which they alter upward or downward depending on a variety of circumstances peculiar to the community, on the practice of other physicians who do similar work and on such factors as the difficulty involved in treatment and the economic status of the patient.

Although preliminary discussion of fees to prevent later misunderstandings with patients has been a recommendation of the American Medical Association for a long time, the public and press have shown the "average fee" proposal an unexpected and rather extraordinary amount of interest.

It is to be hoped that the House of Delegates will give its most earnest consideration to the recommendations adopted already by so many of the county societies, and while not tying the hands of C.P.S. trustees by too much arbitrary or specific legislation, will nevertheless clearly set forth principles for their future guidance.

The Practice of Medicine

THE ART OF MEDICINE is caring for a patient, while the science of medicine deals with diagnosis and management of disease. Together they constitute the practice of medicine. For as long as medicine is practiced it will remain an art as well as a science.

The practice of medicine has become increasingly complicated in the last 50 years as the science of medicine has made available many instruments and diagnostic and therapeutic procedures that are costly to use and frequently demand the assistance of specially trained personnel. Increases in scientific knowledge in all aspects of medicine have come so rapidly and in such volume that it has been difficult for a single physician to keep abreast of those necessary for the care and treatment of his patients. With the pace of modern life there has been all too frequently a strain or even fracture of the patient-physician relationship which is the basis of the art of medicine.

These changes along with so many others characteristic of modern civilized life in the United States have greatly altered the practice of medicine. The trend has been, as it is in all complicated biological structures, toward a division of labor, toward specialization. In multicellular organisms, certain cells, tissues or organs assume certain specific functions for the good of the whole and immediately become dependent on other parts of the organism for essential functions which for them have become vestigial or non-existent. The unicellular organism, however, continues to perform all necessary functions for continuance of a life which, although it may be one of independence and freedom, is nonetheless one of rather limited horizon.

Largely because of the changes occurring in modern society and in medicine itself the practice of medicine has changed in ways that have led to the organization of physicians for the practice of medicine. These organizations may be in groups, in partnerships, in associations, in clinics, in open and closed panels, in and around hospitals and in parts of industrial and other concerns. Each method of practicing, be it that of the individual in general practice or of the salaried highly trained specialist in a large group, has advantages and disadvantages.

In light of the great interest in the subject of the practice of medicine, not only among the members of the medical profession but among the public as well, it seemed appropriate to present in CALIFORNIA MEDICINE a series of factual articles on various methods of practice in California. In the February issue an article on the Permanente Foundation was published. In this issue, features of the Ross-Loos Group in Los Angeles are described (page 477). Subsequently, with the continued cooperation of those responsible for them, it is planned to present factual material concerning the medical and hospital plans of the various railroads of California and of a closed panel group in San Francisco. Thereafter it is anticipated that there will be published data concerning other groups representative of clinics, partnerships, industrial and perhaps of individual practice of medicine.

The reader will find much interesting factual material in these presentations. In considering the various plans of practice, perhaps the final thought of the physician will be of the place of the patient-physician relationship in them. Is there free choice of physician? There is the keystone upon which the art of medicine depends. It is essential for the best practice of medicine no matter what the form of practice.

California MEDICAL ASSOCIATION

NOTICES & REPORTS

Cancer Detection

A Statement by the California Cancer Commission. An outline of methodology, implementation and potential value of cancer detection as a part of general health surveys

PRESENT RATES of cancer control are far short of what is theoretically achievable, particularly when the disease occurs in certain accessible sites. The case for cancer detection procedures is based on the premise that periodic physical surveys of asymptomatic persons would uncover concealed cancer at a curable stage in such numbers as to be a rewarding effort, commensurate with the time, effort and cost involved. Statistical evidence listed herein indicates that this objective can be reached, but only if there is an informed segment of the population which will persist in being screened year after year. It is obvious that only a minor fraction of the population will interest itself in such a regular program. Even if applied on a mass scale, the contribution to cancer control would represent only further fractional improvement in the total problem. In spite of these deficiencies, a significant effort in cancer case finding would decrease the lag between what is theoretically possible with present techniques of treatment and our present inadequate control of malignant neoplasms. A recent report¹ indicates that probably not more than 15 per cent of all cancer cases in California survive five years after the diagnosis is made.

Of those sites in which concealed or occult cancer may be found by a standard detection survey, the estimated gap between maximum cures with available knowledge and present cures is outlined below as modified from Steiner.²

Site	Per Cent of All U. S. Cancer Deaths, 1948	Per Cent Present Cures	Estimated Maximum Cures with Available Techniques, Per Cent
Breast	9.2	20	35
Uterus	8.2	35	75
Prostate	5.7	5	10
Skin	1.7	85	98
Mouth	1.5	15	40
Larynx	0.9	30	75

In addition to those sites accessible by standard physical survey, a common form of cancer can be detected by endoscopic examination—carcinomas of the anorectosigmoid segment of the colon. As approximately seven out of ten cancers of the colon and rectum are within reach of the finger and proctoscope, figures corresponding to those above may be estimated thus:

Large intestine16.2% 20% 65%

The present average cure rate of cancer in these seven accessible sites is at present, then, about 31 per cent. If the maximum cures with available knowledge were secured through treatment at an asymptomatic stage, the cure rate should increase to about 57 per cent, or an almost two-fold increment in cures.

Some disparity between the theoretical and the achievable will always persist, for the difference represents a complex problem both in attitude and edu-

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cation of the public and the profession, as well as psychological and economic factors. In our present state of knowledge, the only effective means for improvement of end result is to bring the patient to effective treatment at an earlier anatomical stage of the disease, which can best be done when the process is still occult, or asymptomatic.

The public is being indoctrinated with the importance of detection procedures: it is the responsibility of the profession to provide periodic health surveys for those who seek such service. It should be emphasized that the objective should be the detection of incipient or occult disease in general, even though the theme of cancer detection may be the most effective lever in securing the interest of presumably well persons. In fact, many disease entities are more susceptible to discovery in an occult phase than is cancer. The most meticulous detection procedure offers only a 6-out-of-10 chance for locating asymptomatic cancer.

For this and other reasons born of experience, the Cancer Commission's philosophy is that detection procedures belong in the physician's office rather than in specially organized, impersonal "cancer detection centers." The operation of such centers primarily for the discovery of neoplastic diseases is illogical for other disease processes are uncovered with 10 to 20 times more frequency than are neoplasms. Cancer detection centers also fail generally in securing consecutive yearly examinations of any significant fraction of their examinees. Continuity of detection procedures can best be done in those who depend on their own physician for periodic surveys. Detection centers are unnecessarily costly, geographically discriminatory and frequently conducted by physicians with extremely limited interests.

In general, of course, the main burden of periodic health surveys will be borne by physicians in general practice, internists and general surgeons. The county medical society has an important function to perform in this respect, usually through its cancer committee. One of the major obstacles at present is that the public has no means of knowing which physicians are interested. A poll of the members of the county medical association should be obtained to set up a roster of physicians who are interested in cancer detection and periodic health surveys. Inasmuch as the American Cancer Society through its educational work is constantly receiving inquiries on this subject, it seems reasonable that the society and its information centers should be provided with a list of these interested physicians in each geographic area. This can only be done, of

TABLE 1.—Points to Be Covered in a Cancer Detection Examination

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- | |
|-------------------------------------|
| 1. Skin |
| 2. Lips and buccal cavity |
| 3. Thyroid gland |
| 4. Breast |
| 5. Abdomen |
| 6. Female pelvis |
| 7. Male genitalia |
| 8. Rectum and prostate |
| 9. Lymph nodes which are accessible |
-

course, with the approval of the county medical society. The function of the American Cancer Society, or any other voluntary agency, should be the demonstration of the need, the education of the public to its value, and in its function in bringing the prospective examinee and the doctor together. Economic considerations should be worked out by the county medical society with the panel of physicians so that no individual will be denied the benefits of a standard cancer detection examination.

The county medical society and its cancer committee must go considerably further than the mere listing of a panel of physicians who have expressed their willingness to do cancer detection examinations. The problem of what constitutes a satisfactory standard or minimum detection examination is something that should engage attention. Each of the physicians on the panel who are going to become cancer detectors should be furnished with information concerning minimum standards, and each physician should accept such standards as a minimum with such additions and elaborations as his own interests may dictate. In Table 1 are seen the nine points recommended for a minimum cancer detection examination. It is emphasized that these requirements are the absolute minimum which can be expected to produce a satisfactory yield of cancer of accessible sites, and represent actually less in the way of examination than that which is carried out by a physician who performs careful routine or annual physical examinations. It is not anticipated that these examiners will do less than they have been doing, but is rather hoped that those whose examinations do not include these points will see that they are added. Physicians to whom the problem of preventive medicine in the early detection of all types of chronic disease represents a challenge, will naturally broaden the examination in accordance with their time, facilities and particular interest.

From the standpoint of cancer detection alone, as one is dealing with a person who is presumably well, the formal taking of the history, a time-consuming procedure, is not productive enough to warrant its inclusion. Routine blood counts seem to offer no

value in cancer detection examinations, for only one examinee in many thousands will have unsuspected leukemia, for which we have only palliative measures at best. The presence of anemia of moderate degree is entirely non-specific and, in fact, the recording of hemoglobin values within normal limits in the presence of advanced cancer is commonplace.

Routine urinalysis is also of so little value as to be an unproductive phase of a cancer detection examination. Only catheterized specimens are of value, in which the microscopic finding of red blood cells would only indicate about 2 per cent of unsuspected cancers in the urinary tract, and again these inaccessible cancers are rarely curable.

Although the findings of Overholt indicate that carcinoma of the lung is more frequently surgically resectable when discovered in a silent phase by roentgenographic examination of the chest, this is of little value on a mass basis unless repeated every six months. Mass x-ray surveys of the chest have indicated that the yield of primary cancer of the lung will be only 10 in every hundred thousand persons examined. This is an incredibly small number when the expense involved is considered.

Proctoscopic examination, although not listed as part of the standard examination here, is strongly recommended since almost 70 per cent of all cancers of the colon, rectum and anus are within reach of combined examination by digital, anoscopic and proctoscopic procedures. The high incidence of polyps, both benign and malignant, in apparently

well persons is such that every doctor who becomes interested in cancer detection procedures should acquire experience in proctoscopic examination through its constant use.

As the statistical picture of cancer mortality is far from being a true representation of cancer as seen in practice, it is more pertinent here to consider the clinician's experience rather than the statistician's sample. In the male the sites of importance from the standpoint of hopeful prognosis are those of the skin, larynx, lip and oral cavity, and in the female the uterine cervix, skin and to a lesser extent the breast. The inaccessible sites are more common in the male. The lesser incidence for inaccessible sites in the female explains the failure of cancer mortality rates to yield in the male. For both sexes combined about 42 per cent of all diagnosed cancers are in accessible sites.

Realizing that almost 70 per cent of all cancers of the colon are within reach of digital and endoscopic examination, and assuming that examinees could have the benefit of visualization of the terminal rectosigmoid segment, about 55 per cent of diagnosed cancers would become detectable by inclusion of these procedures.

This provides the opportunity for some theoretical calculation as to what sort of impact a cancer detection examination, which includes proctoscopic examination and chemical testing of the stool for blood, would produce in a segment of the population which would submit regularly to such detection procedures. In Table 2 is shown the percentage of cancer mortality due to lesions primary in six accessible anatomical sites in the female. These combined sites account for 42.4 per cent of all female cancer deaths. Assuming the sort of cancer detection examination just described, and assuming effective treatment at an early stage because of discovery of these lesions while still in a silent phase, and accepting average reported five-year cure rates in such early lesions, the mortality should be reduced to 23 per cent. The theoretically achievable effect would be a reduction of almost 50 per cent in mortality from cancer arising in "accessible" sites in the female. Conversely stated, the increase in five-year survival from all cancer in the female should almost be doubled, from the present rate of 25 per cent to 45 per cent.

A similar theoretical predicted reduction in mortality for the male (Table 3) is not as encouraging. Only 30.6 per cent of all cancer deaths in the male are accounted for by lesions in these accessible sites, and the application of cancer detection methods would produce a reduction in mortality to 20.82 per cent or a reduction of one-third in cancer mortality from lesions originating in accessible sites. This

TABLE 2.—Showing: 1a) Female Contribution to Mortality Rates from Cancer Originating in Six Accessible Sites, and 1b) the Estimated Reduction Achievable by Treatment at an Early (Asymptomatic) Phase

Site of Cancer	Mortality Rate (Per Cent)	Estimated Mortality Rate with Detection (Per Cent)
Buccal cavity	1.4	0.39
Rectum, anus	4.3	2.58
Larynx	0.2	0.04
Uterine cervix	16.6	4.16
Breast	18.9	15.20
Skin	1.0	0.60
Total.....	42.4	22.97

TABLE 3.—Current and Calculated Mortality Rates for Males from Cancer in Five Accessible Sites, Compared to Table 2 for Females

Site of Cancer	Mortality Rate (Per Cent)	Estimated Mortality Rate with Detection (Per Cent)
Buccal cavity	5.0	2.10
Rectum, anus	8.2	4.92
Larynx	2.0	0.40
Prostate	13.7	12.40
Skin	1.7	1.00
Total.....	30.6	20.82

would nevertheless be a significant improvement in current poor five-year survival rates from cancer in the male, or from something under 20 per cent to a figure approaching 30 per cent.

CONCLUSIONS

1. Periodic cancer detection examinations limited to asymptomatic persons can be of distinct value as an adjunct phase of a cancer control program.

2. Its value is in the discovery of certain accessible cancers during their silent phase, thus bringing to definitive treatment a larger number of biologically favorable lesions while still actually limited to their anatomical sites of origin.

3. More cancers will be discovered by the widespread use of a minimum or standard type of examination than by the restricted use of a more elaborate examination.

4. Detection centers as currently operated contribute little toward education of the public or the profession, and render a minimum service because of the small number of examinees and their failure to continue periodic examination. A limited number of well organized detection centers may be of value in the future study of screening mechanisms for more efficient detection of silent cancers.

5. Cancer detection surveys are best done by interested physicians as part of office practice.

6. The county medical society should function to bring the public and the interested physician together by maintaining rosters of qualified, interested physicians preferably made available to local units of the American Cancer Society and its information centers.

7. By regular examination of a given segment of the population over a period of ten years, the cumulative yield of cancers discovered should approach 8 per cent, compared to about 0.2 per cent in most detection centers.

8. About 42 per cent of all cancers are accessible by a minimum physical examination.

9. With the addition of proctoscopic examination, about 55 per cent of cancers can become "accessible."

10. Uniform application of this more adequate survey would produce, by calculation, a decrease of 20 per cent in cancer mortality in women, and a 10 per cent reduction in men.

11. Cancer detection should be a phase of general, periodic, health surveys.

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The Ross-Loos Medical Group

A GROUP OF PHYSICIANS, associated in the form of a co-partnership, is engaged in the practice of medicine under the name of *Ross-Loos Medical Group*. It consists of 130 full-time staff members. All devote their full time to the practice of medicine and surgery, or to the administration of the affairs of the Ross-Loos Medical Group.

The purpose of Ross-Loos is to supply medical care to its patients (subscribers and dependents). In this sense it differs not at all from a private physician, whether he operate singly or with others. All patients pay for their services.

Ross-Loos does differ from almost all other medical groups in the manner of payments by its patients (its subscribers). Payment for services (both for groups and individuals) is based on a periodic payment plan. For this periodic payment (by groups and individuals) Ross-Loos agrees to take care of almost all medical and surgical services (there are certain specified exemptions) necessary for the patient.

All persons either in groups or as individuals desiring Ross-Loos medical service must make application for the service. No solicitation or advertising of any kind has ever been or will ever be engaged in by Ross-Loos. Ross-Loos conforms strictly to the ethics of the medical profession.

All subscribers are free to terminate the Ross-Loos service at any time. All patients of Ross-Loos have free choice in the selection of a physician or physicians from its large staff of more than 130 physicians. Consultants outside the staff are available at all times, and are frequently called in.

Ross-Loos is not a corporation, not a cooperative, not a non-profit organization. It is not a part of, nor is it subsidized by, any foundation, trust, religious, educational, political, or secular body, or government agency. It is not tax exempt and it neither seeks nor receives any support, grants, subsidies, or special favors from any unit of government—local, county, state or federal.

THE PHILOSOPHY OF ROSS-LOOS

The underlying philosophy of Ross-Loos was formulated by Drs. Donald E. Ross and H. Clifford Loos at the time the partnership was established, in 1929. That philosophy—or policy—has remained unchanged to this day.

This is one of a series of articles concerning methods of practice of medicine in California by physicians in groups, partnerships, organizations and individually. It was prepared at the request of the Editor, by the Ross-Loos Medical Group. Others will appear from time to time in CALIFORNIA MEDICINE.

The articles are for the information of members of the California Medical Association. Publication does not imply official approval or disapproval by the Association.

In the late 1920's there were few functioning plans anywhere in the United States which covered the contingency of illness for the average citizen. Organizations and institutions were already well developed and widely accepted which took care of many of the possible emergencies which might arise for the average person. However, there were, at that time, few plans by which the average man and his family could be protected against the financial hazards arising from illness and disease. The burden of doctor and hospital bills fell heavily upon people within the low and middle income groups.

Doctors and other health experts already knew and were proclaiming the need for preventive medicine.

The founders believed that effective preventive medicine could be achieved within the framework of existing medical practice and ethics, and without the need for governmental interference through some form of socialized medicine. They were also of the opinion that a structural set-up could be established that would sharply cut the yearly cost of medical care to the average family. It was only through the establishment of a group of doctors that this condition could be met.

The basic points in the Ross-Loos philosophy were and are:

1. To pool the combined skills and knowledge of a group of physicians, including specialists to care for their patients.
2. To render medical and hospital service to individuals through their voluntary affiliation with a health group or committee.
3. To establish a monthly fee for service, based upon estimated costs of rendering such a service.
4. The organization established to undertake this work should be owned, managed and controlled by doctors of medicine.
5. The same ethical rules which covered the individual practitioner should apply to each and every staff member of the group, and the group itself.
6. The organization should not engage in any advertising or in the solicitation of subscribers to its services.

The Ross-Loos Medical Group came into being April 1, 1929. Nearly a year earlier, several employees of the Los Angeles Department of Water and Power, inspired by former employees of the Southern Pacific Railroad which had a company health program, began an investigation among local physicians to see whether some type of group medical insurance plan could be developed. Among others

approached were Drs. Donald E. Ross and H. Clifford Loos, who had already been thinking along similar lines.

Many conferences took place between the employee group and these two physicians. Nearly a year was devoted to working out details before the Ross-Loos Medical Group was formally organized. Its first list of subscribers consisted of somewhat more than 400 employees of the Los Angeles Department of Water and Power.

The periodic fee paid by the members from the Department of Water and Power was \$1.50 per month. Medical service, conforming in every particular to the highest ethical standards, was made available to all subscribers. No fees were charged for medical services to their dependents at that time although the dependents paid for all drugs and hospitalization.

Subscribers to the Ross-Loos service encouraged other employees from the Department of Water and Power to join the health group.

Within a few months after its inception, an employee of the Los Angeles Fire Department (whose brother was a Ross-Loos subscriber from the Department of Water and Power) asked if Ross-Loos would accept a group of fire-fighters as subscribers. The two physicians then counselled with the employees' Health Committee of the Department of Water and Power, and obtained permission to enroll the fire-fighting group. Other groups followed and by the middle of 1932 the number of subscribers had increased ten-fold.

RULING ON CHARGES OF VIOLATING ETHICS

Group medicine, as practiced by Ross-Loos Medical Group, was largely a new venture in the early 1930's. Quite naturally most physicians did not understand it. Some of them feared its growth. Others charged Ross-Loos with violating the ethics of the medical profession by solicitation of membership through advertising and other means. In 1934 charges to this effect were brought against Drs. Ross and Loos by the members of the Los Angeles County Medical Association, and they were ordered expelled from the Association. The two partners appealed the decision and carried the case to the Judicial Council of the parent body, the American Medical Association. The highest body of the medical profession declared that the charges were not properly proven, that an adequate investigation had not been made and that proper procedure had not been followed. The Judicial Council then reversed the decision of the County Medical Association and ordered the physicians reinstated. This was done.

INDIVIDUAL SUBSCRIBERS ACCEPTED

Late in 1936 Ross-Loos Medical Group modified its structure to permit individual subscribers the use of its services. This change in policy grew out of the fact that large numbers of group subscribers lost their Ross-Loos membership when they changed jobs or retired. Many other Ross-Loos subscribers had friends or relatives who desired their services but were unable to function through any group as such. Increasing pressure from both of these sources grew with each passing year.

The decision to permit individual subscribers was taken only after long and careful consideration among the partners of the organization for it was feared that office and administrative overhead would increase the cost to individual subscribers very substantially. As a matter of fact, however, the rate for individual subscribers is usually no more than 50 cents per month above that of group subscribers.

At the close of 1952 Ross-Loos had 28,000 group subscribers and 9,000 individual subscribers. In addition, it is estimated that the average number of dependents per subscriber is 2.2. This means in actual fact, that there are between 125,000 to 130,000 patients who are regularly served by the Ross-Loos Medical Group.

NATURE OF ROSS-LOOS SERVICES

Subscribers to Ross-Loos services consist of: (1) those who subscribe through a group; and (2) those who subscribe individually.

There is no definite limit to the size of the group which makes application for medical services with Ross-Loos Medical Group, but anyone desiring membership within the group must sign an individual application for service. A contract or agreement is entered into between the official representatives of the group and the Ross-Loos medical organization.

The basis of accepting members in a subscribing group varies with the many factors of physical condition to be considered. Some of these are—whether the employer asks for a pre-employment physical examination; the stability of the employees; the male and female complement of the group; the age of the applying employees. All of these will influence whether the group can be taken without physical examination or whether any control will be exerted.

Once the members of the group have been accepted, Ross-Loos agrees that "The Medical Group shall furnish medical and surgical care and attention, including professional consultations, treatments, examinations, surgical procedures, and preventative care, including the following: Laboratory tests, x-ray examinations, physiotherapy treatments,

splints and dressings, consultations, eye examinations, ambulance service (for a distance not to exceed 15 riding miles traveled by a patient on any one trip), and hospitalization.

Hospitalization is declared to mean: A bed in a two-bed room, or a bed in a private room for semi-contagious diseases, in a first class hospital designated by the Medical Group, for a period not to exceed 90 days in any period of 12 consecutive months, including general nursing, x-ray examinations, laboratory tests, operating room, medical and surgical supplies, special diets, meals, anesthetics, electrocardiograms, physiotherapy treatments, hypodermic therapy, oxygen service, drugs, dressings, laboratory examinations, and all other adjuncts customarily given in ordinary hospital procedure.

Exemptions to the above are declared to consist of the following conditions or the results thereof: Dental care, insanity, chronic alcoholism, drug addiction, or attempted suicide. Ross-Loos does not furnish materials, procedures, or hospitalization if ordered by any doctor outside its organization. It will not supply special nursing care, sick room furniture, crutches, wheel chairs, orthopedic appliances, eye glasses, blood plasma for transfusions, hypodermic medication or drugs given outside of the hospital, radium, x-ray therapy, dental x-rays, hospitalization for cases of obstetrics, abortions, miscarriages, venereal diseases, mental diseases, contagious diseases, alcoholism, drug addiction or conditions arising therefrom or sanatorium or rest home treatment.

Subscribers are entitled to service at any hour of the day or night every day of the year, to all necessary home calls and office calls. Ross-Loos asks that the patient place himself within a radius of fifteen miles of any one of its designated offices to be entitled to service. In practice, this means that the subscriber can live almost anywhere in Los Angeles County.

Group subscribers are also entitled to special privileges at low fees for services rendered to their dependents. A dependent is defined as a spouse and children under 19 years of age. Each subscriber must list his dependents with the organization. The fee schedule for dependents is subject to change on 30 days' written notice to the subscribing group; but as a matter of fact such changes as have taken place have been due entirely to increased medical costs. No change has been made in these fees in spite of increasing costs since 1947.

Prior to World War II, dependents paid 75 cents for each office consultation or treatment. At present the following charges are made to dependents: \$1.25 for office calls, \$2.00 for daytime resident calls, and

\$2.50 for resident calls at night. Minor operations performed at the office (including surgery and recovery bed) cost not over \$20. Major operations cost \$25. Confinement cases, including prenatal and post-natal care, cost \$50.

The agreement between Ross-Loos and the subscribing group provides that the agreement may be cancelled and services terminated by either party by notice in writing given not less than 90 days prior to the date of cancellation. Ross-Loos may likewise cancel the subscription of any subscriber when any payment provided for is not paid when due. Any subscribers within a group may resign from Ross-Loos at any time by submission of a written notice to that effect from the subscribing group to Ross-Loos Medical Group.

Individual Subscribers: Any person between the ages of 21 and 50 is eligible for application (although a member of any group may transfer to individual membership regardless of age). A prospective member must first contact one of the offices of the Ross-Loos Medical Group either by mail, telephone, or in person to get an application form. This must be filled out and a physical examination undertaken. Individual subscribers pay \$3.00 for the examination plus a \$6.00 registration fee payable at the same time. In the event an applicant is not accepted as a subscriber, the registration fee is refunded. Individual subscribers pay a monthly fee of \$6.00, payable on the first day of each month for the preceding calendar month.

A subscriber may terminate his subscription upon 30 days' written notice to the Ross-Loos Medical Group. The Medical Group in turn may terminate its services to the subscriber upon 30 days' notice in writing. However, should a subscriber be under treatment for an illness or injury on the effective date of termination, Ross-Loos agrees to continue its services for a further period of 60 days.

All individual and group subscribers receive identification cards for themselves and their dependents. These are presented by the patient when requesting service. Medical services given to individual subscribers are the same as those given to group subscribers.

THE STRUCTURE OF ROSS-LOOS

At its inception in 1929, and continuing through until approximately April 1, 1936, the organization was a co-partnership of Dr. H. Clifford Loos and Dr. Donald E. Ross. Early in 1936 that co-partnership was widened. Sixteen members of the staff were taken into the partnership. During the next decade

or so, the personnel of the partnership underwent several changes due primarily to death and disability. At the present time, there are 12 partners.

General control of Ross-Loos is in the hands of the partnership. The partners meet once a week to consider business affairs and the general operation of the organization. In making decisions all partners have only one vote each.

Due to the size of its operations, the partnership established a number of sub-committees (usually of three doctors each). These sub-committees include: Finance, Hospitalization, Personnel, Purchasing, Housing, Maintenance and Scientific.

Dr. H. Clifford Loos acts as administrator and with the help of the partners handles all problems of administration and control. Dr. Donald E. Ross is the chief surgeon and, assisted by the partners and staff, devotes his time to the medical, surgical, and scientific interests of the organization.

For many years now, the work of the physician members of the group has been divided into the following departments: General practice, internal medicine (including cardiology, gastroenterology, endocrinology, etc.), surgery, obstetrics-gynecology, ophthalmology, otolaryngology, pediatrics, dermatology, urology, allergy, neuropsychiatry, x-ray, proctology, orthopedics, and physical medicine.

STAFF MEETINGS

Regular meetings are held monthly and all staff members are expected to attend. At these meetings papers are read and reports given on matters concerning the entire medical staff. Outside speakers of note are often invited. Sectional and departmental meetings are likewise held at regular intervals to deal with specific problems relating to work and study in each field. In addition, bulletins and inter-office memoranda are used to inform staff members of anything of importance not discussed at regular meetings.

CHARTS AND MEDICAL CASE HISTORIES

The medical record of every patient is kept on a chart. Each subscriber is given a chart number. This number is also used by his dependents. The subscriber's charts are kept at the Ross-Loos office to which the patient usually goes for medical service. A master file of all subscribers and dependents is maintained at the central office. Each physician makes his own entries on the medical case history chart at the time he examines the patient. Notations are also entered by the laboratory or x-ray departments at the time their services are used.

DEPARTMENTALIZATION OF SERVICES

Home calls, whether day or night, are obtainable by merely calling any office of the group. Special members of the office staff route and schedule these calls from the home-call doctors to speed the service and avoid unnecessary travel by the doctors. The home call office always checks on the patient the following day to find out whether additional services are needed.

Nearly ninety per cent of all Ross-Loos patients are examined or treated at one of its offices in the course of a year.

Minor operations requiring hospitalization for less than one day are performed in the surgery department of the main medical building, where there are 20 recovery beds to take care of patients.

Ross-Loos does not maintain its own hospital, nor does it intend to build one. Nearly all its patients are sent to Queen of Angels Hospital.

Ross-Loos maintains two departments in connection with hospitalization. One of these is devoted entirely to arranging for ambulance service, getting the bed at the hospital, and informing the doctor or surgeon of the time, place and location of his patient at the hospital.

The second is the Medical Record Department which records and tabulates all pertinent information and statistics in connection with hospitalization, major and minor surgery, and diagnosis. Both before and after operation, this vital statistical material gives every doctor a breakdown of necessary information regarding every hospitalization case he or any other member of the staff has attended to. The standard medical index pattern is used in recording these cases. Such records have been maintained since the inception of Ross-Loos. At present, two full time librarians are employed for this work. All material in the Ross-Loos Medical Record Department is available to all members of its staff for research and study or in the preparation of scientific books, articles or monographs.

All records and accounts at the outlying offices are identical in form and they are handled in the same manner as are those in the central office. They constitute, in fact, an integral part of the whole organization. Duplicate general records are kept on each patient and his dependents, one set of which is on file at the main office.

All bookkeeping, accounting and purchasing are handled from the main office in close cooperation with the sub-offices.

Doctors and nurses in the sub-offices maintain regular, daily telephonic contact with the medical specialists and departments at the central office.

THE ROSS-LOOS CLIENTELE

Ross-Loos subscribers represent a good cross-section of the population of Los Angeles County. Almost all nationalities are included.

Occupationally, they include university and college professors, high school and elementary school teachers, policemen, firemen, city and county civil service employees, Department of Water and Power employees, librarians, dairy workers, bakers, engineering employees, aircraft employees, retail market employees, postal employees, rubber workers, oil workers, motion picture employees, radio network employees, insurance company employees, astronomers, bus drivers, consumer groups, real estate groups, brokerage house employees, and many others.

Individual subscribers represent every walk of life from unskilled laborers to bankers.

The majority of group subscribers are civil service employees or teachers. Most other groups, too, are made up of skilled or professional workers in occupations or industries where there is relative job security and low turnover. Such stability and security make for greater security and stability of the medical group itself.

THE SUBSCRIBERS' HEALTH COMMITTEE

The key to successful group medical practice and the maintenance of effective liaison between Ross-Loos and its patients lies in the Subscribers' Health Committees.

The Health Committee is the direct, active, responsible representative of the subscribers. Every group which wishes to obtain for its members (and their dependents) the medical services of Ross-Loos, no matter how large or small, must first select or elect a Health Committee to act as official spokesman for the group.

It is the Health Committee which works out details of the written agreement entered into between the subscriber group and Ross-Loos. It is the Health Committee which assumes responsibility for collecting dues from its members and turning these fees over to Ross-Loos. This procedure enables the Health Committee to keep a close and accurate tab on its members.

The Health Committee performs another invaluable function in that it serves as a clearing house for questions, complaints and suggestions from its own members. Subscribers make known their wants and complaints more freely to such a committee than to the medical or administrative staff of Ross-Loos. The Health Committee can quickly and easily transmit these suggestions, questions or complaints to the proper authorities of Ross-Loos for action. This

procedure is a valuable time saver for all concerned and is also a means for speed and efficient action. Tensions and misunderstandings between patients and the doctors can be cleared up quickly with a minimum of friction.

By means of the Health Committee Ross-Loos is enabled to discover weaknesses within its own staff (medical, technical, or administrative) in their dealings with group subscribers. The administrative heads of Ross-Loos then have an effective means of finding out if its services are reaching the people, as well as the degree of satisfaction or dissatisfaction with all or any part of it. In other words, by means of dealing with group subscribers through their Health Committees, Ross-Loos is able to give its members better service; a quick and direct approach for solving their problems. At the same time it provides Ross-Loos with a means to check and control its own services.

Health Committees for the various groups affiliated with Ross-Loos hold regular meetings (usually once a month) at which they discuss their problems with representatives of Ross-Loos. It is their job, as the direct representative of the subscribers, to make sure that these subscribers know about and obtain all services to which they are entitled.

Health Committee members perform their jobs on a volunteer basis, although some of the larger groups maintain a full time or part time employee to handle records and accounts. In such instances, members of the group usually assess themselves a small quarterly fee to cover this overhead. Ross-Loos will not do business with any group which charges its members a fee over and above the absolute minimum necessary to cover such office expense.

When interested individuals approach Ross-Loos about group membership, they are not automatically accepted as members. Quite to the contrary, they are urged first to check and study the many insurance and medical plans now available to them, including Ross-Loos, to determine which one most nearly meets the needs of their group. If, after such study, they are convinced that Ross-Loos will best fulfill their needs, the administrative representatives stand ready to discuss details with them and work out the basis for a group agreement. It is explained that members of their group who wish to join must individually make out an application form.

It has been proved by actual practice over a period of nearly a quarter century that the Health Committee is one of the cornerstones to successful group periodic payment medicine, because it offers an efficient and democratic method of communication between the subscriber and the medical group itself.

THE MEDICAL STAFF

No matter how efficient and effective all other parts of the medical group, its heart and center is the medical staff. The selection of new members for the medical staff is the responsibility of the Personnel Committee of the partnership. In the selection of such men the committee demands the following qualifications:

Physicians must have graduated from an approved medical school.

They must have served at least a year's internship in an accredited hospital.

They must have served a one-year residence in an accredited hospital.

Finally (though this last point is not always strictly adhered to), they must have been out of medical school for not more than seven years. In specialties where more training or experience is desired, this does not apply.

In short, Ross-Loos wants young physicians who have had the benefit of relatively recent training and internship, tempered by a few years of active medical practice.

There are at present 118 doctors on a salary basis. Each is given his own private office and examination rooms; each is provided with the necessary nurses and office help; and each works a regular forty-hour week. In addition, all doctors are on an emergency schedule to cover nights, holidays and week-ends.

Doctors are encouraged to practice medicine in the manner they were taught; but above this, they are given the added advantage of close association and consultation with a host of other doctors and specialists, as well as technical and laboratory facilities such as no individual doctor ordinarily possesses.

Some staff doctors have contracts with Ross-Loos. These contracts are worked out to meet mutual interests of the individual doctor and Ross-Loos. In addition to the salary (which is comparable with and oftentimes exceeds that paid by other institutions) every staff doctor receives a two-week vacation with pay each year during the first five years of employment; three weeks' vacation with pay each year for the next five years; and four weeks' annual vacation with pay after ten years of employment. The group likewise maintains a life and total disability insurance policy for him, for which the group pays more than half the premium. The doctor automatically becomes a subscriber (without charge) to Ross-Loos and is entitled to all its advantages. After three years' service with Ross-Loos, he becomes a joint participant in the profits of the organization.

All doctors joining the staff are assigned work

either as general practitioners doing home call work from the central office (either night or day); as general practitioners in one of the twelve branch offices; or as a specialist functioning in the main building. So far as possible, doctors are placed in areas where they wish to live. Such preferences are filled on the basis of seniority. Although some doctors who function in the outlying offices are specialists, general medicine is practiced at these offices. Most patients requiring the attention of specialists are referred to the downtown offices.

THE TECHNICAL AND ADMINISTRATIVE STAFF

Nurses, pharmacists, x-ray, medical and laboratory technicians receive not less than the prevailing wage scale. They work forty hours a week. They automatically are entitled to free subscription to Ross-Loos medical services; group insurance, for which the organization pays more than half; and two weeks' vacation with pay each year. Similar working condition and benefits are granted all other employees.

In the selection of all non-medical personnel, technical competence and experience are a basic requirement. Pleasing and cooperative personalities are likewise important in dealing with large numbers of patients who require service each day of the year.

PERSONNEL AND PATIENT RELATIONS

One of the major problems to which Ross-Loos has devoted much time and attention has been how to attain and to maintain the direct, personal intimate contact between physician and patient. This relationship, as every physician knows, plays a very important part in establishing the proper rapport between physician and patient.

Ross-Loos has attempted to meet this problem in many ways. First and foremost has been its insistence that each subscriber have a free choice, insofar as possible, in selecting from among the large staff the physician whom he likes best. The physician, in turn, comes to know these patients intimately. To all intents and purposes they are *his* patients. In the second place, all staff members and other personnel are constantly reminded that Ross-Loos patients must be treated with both courtesy and efficiency.

At the time the Ross-Loos Medical Group was first established in 1929, and for the first ten years of its existence, its major problems consisted of the following:

1. How to interest physicians in associating with such a radical and untried experiment.

2. How to overcome the general hostility of the medical profession and the public indifference to group medicine.

3. To determine how complete should be the medical coverage given groups subscribing for Ross-Loos services.

4. How to determine in advance an adequate monthly fee to the subscribers which would be low enough to be attractive to them, yet high enough to enable the group to attract good doctors.

5. To determine the extent of the area which could be covered in terms of service and home calls.

6. To arrange for speedy and adequate hospitalization.

Within a year's time it was realized that the original monthly fee was inadequate to give proper medical care to the subscribers and their families. Medical and hospital expenses mounted rapidly. For example, in 1930 Ross-Loos paid \$2.75 a day for hospitalization of its patients. Now the rate exceeds \$25 a day. At intervals as they have occurred these increased costs were explained to the Health Committees. New proposals were made which were acceptable to the committees, which, in turn, helped

work out new fees commensurate with the services being given.

Additional problems now faced include:

1. The threat of governmental interference in the practice of medicine.

2. Richly subsidized defense plants and governmental agencies which can and do set the standard of price for physicians, nurses, technicians, receptionists, secretaries and other help.

3. The aging population of the country at large and the higher average age rate of the subscriber groups.

Solution to the last of these problems has been partially met by use of a sliding scale of dues.

To attract and hold efficient personnel, various incentive programs have been devised as well as reducing hours of work, increasing pay, and giving all employees numerous other benefits.

How to meet the continued encroachment of government in the field of medicine is one which obviously cannot be solved by the Ross-Loos Medical Group nor even by the medical profession as a whole. It must be solved by an enlightened citizenry.

In Memoriam

ANDREWS, HENRY J. Died in Los Angeles, February 28, 1953, aged 74. Graduate of Northwestern University Medical School, Chicago, Ill., 1907. Licensed in California in 1909. Doctor Andrews was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.



BRENNEMAN, RICHARD E. Died in Sawtelle, February 15, 1953, aged 79. Graduate of Harvard Medical School, Boston, Mass., 1900. Licensed in California in 1939. Doctor Brenne-
man was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.



COLVER, BENTON N. Died in Los Angeles, March 14, 1953, aged 82, of coronary artery disease. Graduate of the American Medical Missionary College, Battle Creek, Mich., and Chicago, Ill., 1904. Licensed in California in 1925. Doctor Colver was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.



HARDIN, CLAUD E. Died in New York City, March 2, 1953, aged 59. Graduate of the College of Medical Evangelists, Loma Linda-Los Angeles, 1930. Licensed in California in 1930. Doctor Hardin was a member of the Stanislaus County Medical Society, the California Medical Association, and the American Medical Association.

HUGHES, HERBERT A. Died in San Diego, March 20, 1953, aged 47. Graduate of the University of Oregon Medical School, Portland, 1939. Licensed in California in 1940. Doctor Hughes was a member of the San Diego County Medical Society, the California Medical Association, and the American Medical Association.



MEYENBERG, WERNER D. Died in Salinas, February 10, 1953, aged 56, of coronary occlusion. Graduate of the University of California Medical School, Berkeley-San Francisco, 1926. Licensed in California in 1926. Doctor Meyenberg was a member of the Monterey County Medical Society, the California Medical Association, and the American Medical Association.



PENDERGRASS, JAMES E. Died in Clovis, December 16, 1952, aged 56, of coronary thrombosis. Graduate of Vanderbilt University School of Medicine, Nashville, Tenn., 1921. Licensed in California in 1921. Doctor Pendergrass was a retired member of the Fresno County Medical Society and the California Medical Association, and an associate member of the American Medical Association.



TEEL, AMBROSE W. Died in Redlands, March 24, 1953, aged 81. Graduate of the College of Physicians and Surgeons, Keokuk, Iowa, 1895. Licensed in California in 1900. Doctor Teel was a retired member of the Los Angeles County Medical Association and the California Medical Association, and an associate member of the American Medical Association.

NEWS & NOTES

NATIONAL • STATE • COUNTY

ALAMEDA

Dr. Clement A. Smith of Boston will be visiting lecturer for the second annual **Clifford Sweet Lectureship** at Children's Hospital of the East Bay in Oakland, May 20 to 22. Beginning at 10 a.m., Wednesday, May 20, the program will continue with both morning and afternoon meetings through Thursday and Friday at the hospital. The Sweet Lecture will be given Friday evening, following dinner, at the Salem Room, Hotel Claremont, Berkeley. Dr. Smith's subject will be "The Newborn Infant."

All sessions will be open to physicians who wish to attend. Reservations for the Friday night dinner and lecture may be made through Children's Hospital of the East Bay, 5105 Dover Street, Oakland 9, California.

LOS ANGELES

Dr. Clinton H. Thienes, director of Huntington Memorial Hospital, Pasadena, was elected a vice-president of the Walter Reed Society at the annual meeting of the organization held last month in Chicago. The society is made up of persons who have served as voluntary subjects for experimental research.

The Los Angeles Dermatological Society in conjunction with the Metropolitan Dermatological Society of Los Angeles is having a **luncheon for visiting dermatologists** on the third day of California Medical Association's Annual Session, May 24 to 28, in Los Angeles. The luncheon will be at the Hotel Clark, Hill Street and Fifth, Tuesday, May 26, from noon to 2 o'clock.

The California Chapter of the American College of Chest Physicians will meet at the Hotel Biltmore, Los Angeles, Wednesday, May 27.

The program follows:

MORNING

Business Session

Culture Media for Growing Mycobacteria—Drake Will, M.D.; Wm. Dunn, M.D., and Emil Bogen, M.D., Los Angeles.

Serum Protein Alterations in Pulmonary Tuberculosis—I. Alfred Breckler, M.D.; Alfred Goldman, M.D.; Eric Stern, M.D., and Mr. Robert Robison, Los Angeles.

Roentgenologic Alterations of the Lung Associated with INH Therapy in Pulmonary Tuberculosis—David Salkin, M.D., and Joseph A. Schwartz, M.D., Los Angeles.

New Trends in Rehabilitation of Tuberculosis Patients—John H. Aldes, M.D., F.A.C.S., and Lorrain M. Huntley, B.S., O.T.R.

Virus Infections of the Lung—A. F. Rasmussen, Jr., M.D., Los Angeles.

AFTERNOON

Selection of Patients for Mitral Commissurotomy—David C. Levinson, M.D.; Alfred Goldman, M.D.; Morley Kert,

M.D.; Jerome N. Sugarman, M.D.; Jack A. Scheinkopf, M.D., and Maurice H. Rosenfeld, M.D., Los Angeles.

The Use of a 20 to 30 Degree Reduction in Body Temperature in Cardiac Surgery—J. Francis Dammann, Jr., M.D.; Marvin Darsie, M.D., and William H. Muller, Jr., M.D., Los Angeles.

Cardiac Resuscitation—Sanford E. Leeds, M.D., San Francisco.

Diagnostic Problems and Therapy of Pulmonary Embolism—John J. Sampson, M.D., San Francisco.

Studies on the Resistance of Pulmonary Tissue to Ischemia—Harry A. Davis, M.D., Los Angeles.

A Correlation of the Spatial Vectorcardiogram with Right Ventricular Hypertrophy—Stephen R. Elek, M.D.; Bertram J. Allenstein, M.D., and George C. Griffith, M.D., Los Angeles.

* * *

Following is the program for the **California Heart Association's** annual scientific meeting to be held the afternoon of Wednesday, May 27, in the Southern California Edison Auditorium, 601 West Fifth Street, Los Angeles:

2:00—Presidential Address—Lewis T. Bullock, M.D., Los Angeles

2:10—Acute Pericarditis—B. E. Pollock, Colonel, MC, San Francisco.

2:30—Changing Patterns of Sodium Metabolism in Essential Hypertension—Daniel M. Green, M.D., Los Angeles.

3:00—Use of Pressor Agents in Myocardial Shock—John J. Sampson, M.D., San Francisco.

3:20—The Pathogenesis of Hypercholesteremia: Introduction of a New Concept—Meyer Friedman, M.D., Sanford C. Byers, Ph.D., and Ray H. Rosenman, M.D., San Francisco.

3:50—Intermission.

4:00—Discrepancy Between the Electrocardiogram and the Clinical Condition of the Patient—Myron Prinzmetal, M.D., Los Angeles.

4:25—Metabolism of the Human Heart in Vivo—Richard J. Bing, M.D., Guest Speaker, Professor of Experimental Medicine, University of Alabama, Birmingham.

SAN FRANCISCO

Writing on "Chemotherapy of the Eye," William Howard Spencer, third-year student in the University of California School of Medicine, won **first prize in the 1952 Schering Award contest**. The annual competition, which last year was open to undergraduate students in 83 medical schools in the United States and Canada, was begun in 1944 by the pharmaceutical firm to encourage the preparation of reports by medical students as a step in training for contributions to the medical literature.

* * *

Dr. O. W. Jones, Jr., associate clinical professor of neurological surgery at the University of California School of Medicine, was elected president of the Society of Neurological Surgeons at the society's annual meeting held recently in New Orleans.

* * *

The 24th annual postgraduate **symposium on heart disease** will be held at the St. Francis Hotel, October 28 and 29, 1953. The San Francisco Heart Association, which has presented this annual postgraduate series for 23 years, has this year invited five Northern California heart associations

to participate in bringing to San Francisco a large contingent of distinguished guest speakers for the occasion. Sharing the planning with the San Francisco Heart Association will be the heart associations of Alameda County, Contra Costa County, Monterey County, San Mateo County and Santa Clara County.

Four guest speakers have already accepted the invitation to participate. They are Doctors Herrman Blumgart of Boston, Howard Burchell of Rochester, Minnesota, Robert L. King of Seattle, and Paul Wood, Dean of the Institute of Cardiology, London.

* * *

Dr. Howard C. Naffziger was elected president of the American Surgical Association at its meeting last month in Los Angeles.

GENERAL

The annual session of the **Gerontological Society** will be held August 25 to 27 in the Mark Hopkins Hotel, San Francisco. Announcement of the meeting said that the program will include papers by outstanding authorities on the biology of aging, the medical problems and the psychological, social, and religious aspects of growing old.

* * *

The fifth annual convention of the **International Academy of Proctology** will be held at the Plaza Hotel, New York City, May 29 to 31, immediately preceding the annual meeting of the American Medical Association. A surgical clinic and seminar will be held May 28 at Jersey City Medical Center under the direction of Dr. Earl J. Halligan. An extensive motion picture seminar of proctologic surgery (including office techniques) will be held May 31. Because general practitioners, as well as gastroenterologists and proctologists, encounter proctologic problems in daily practice, much of the program has been planned to answer their questions. All physicians are invited to attend.

* * *

The annual meeting of the **Western Orthopedic Association** will be held at Sun Valley, Idaho, October 5 through October 8, 1953. Further information may be obtained from the office of the Secretary, 1301 Spring Street, Seattle 4, Washington.

* * *

The tenth annual meeting of the **American Geriatrics Society** will be held at the Hotel Commodore, New York City, May 28 to 30. The first two days will be devoted to scientific papers and discussions. The annual dinner will be held Friday evening, May 29. On Saturday afternoon the society is invited to see the work being done at the William I. Sirovich Day Center, 203 Second Avenue, New York City.

* * *

A special committee of the California Medical Association which worked out standardized **methods of measurement of joints** for use in evaluation of compensation claims has been holding meetings with the various county medical societies, in cooperation with the California Indus-

trial Accident Commission, to present the methods and explain their use.

The committee has expressed a willingness to appear before groups particularly interested in compensation evaluation.

Further information may be obtained from Dr. Packard Thurber, chairman, 111 West Seventh Street, Los Angeles.

POSTGRADUATE EDUCATION NOTICES

MEDICAL EXTENSION UNIVERSITY OF CALIFORNIA

Postgraduate Courses for 1953

Pediatric Conference, June 22 through 26. Fee to be announced. Medical Center.

Conference on General Surgery, June 15 through 19. Fee \$75.00. Medical Center.

Obstetrical and Gynecological Conference, September 2, 3, 4. Place and fee to be announced.

Ophthalmology (for specialists), September 14 through 19. Fee \$75.00. Medical Center.

Medicine for General Practitioners, September through November. East Oakland Hospital. Fee \$50.00.

Evening Lectures in Medicine, September through November. Fee \$50.00. Mills Memorial Hospital, San Mateo (probably).

Contact: All inquiries to be addressed to Stacy R. Mettier, M.D., Professor of Medicine, Head of Postgraduate Instruction, Medical Extension, University of California Medical Center, San Francisco 22.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Cardiology—Date: June 15-19. Fee: \$75.00.

General Medicine—Date: June 15-19. Fee: \$75.00.

Surgery of Trauma—Date: June 22-26. Fee: \$75.00.

General Surgery—Date: June 22-26. Fee: \$75.00.

Programs and further information may be obtained from the Office of the Dean, Stanford University School of Medicine, 2398 Sacramento Street, San Francisco 15, California.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES MEDICAL EXTENSION in cooperation with SCHOOL OF MEDICINE

Laboratory Technicians' Symposium—

Date: June 20 and 21 (all day)—UCLA Campus.

Fee: \$15.00.

Contact: Dr. Thomas H. Sternberg, Head of Postgraduate Instruction, Medical Extension, University of California, Los Angeles 24.



THE PHYSICIAN'S *Bookshelf*

THE TREATMENT OF DIABETES MELLITUS—9th Edition. Elliott P. Joslin, A.M., M.D., Sc.D., Medical Director, George F. Baker Clinic, New England Deaconess Hospital, Clinical Professor Emeritus, Medicine, Harvard Medical School; Howard F. Root, M.D., Associate in Medicine, Harvard Medical School; Priscilla White, M.D., Sc.D., Instructor in Pediatrics, Tufts College Medical School; and Alexander Marble, A.M., M.D., Clinical Associate in Medicine, Harvard Medical School. Lea and Febiger, Philadelphia, 1952. 771 pages, \$12.00.

This ninth edition of Joslin's classic book on diabetes still occupies the number one position among the books on diabetes.

It seems as though everything regarding diabetes is mentioned, and there are innumerable references to all phases of diabetes. Actually the only omission this reviewer could find was that the distinction between the glucose tolerance tests of liver disease and of diabetes was not too clearly defined.

The book is unduly long and some parts seem rather laboriously written, and it is also true that one can't sit right down with it and find quickly how to treat a new diabetic. Nevertheless, it is hard to imagine anyone treating many diabetics without having this book handy as a frequent reference.

It is truly a "must" as a handy reference book for any internist or general practitioner.

* * *

OPERATING TECHNIQUE—Fourth edition. St. Mary's Hospital, Rochester, Minn. W. B. Saunders Company, Philadelphia, 1952. 345 pages, \$6.50.

This excellently gotten up little book fulfills its purpose in every way. Its authors state that in the operating rooms at St. Mary's Hospital uniformity and simplicity of procedure are stressed with allowances for the preferences of the surgeon and requirements of the patient. Excellence, uniformity, simplicity and clarity are the chief virtues of this volume.

The specialist in gynecological surgery may object to having his operations included in the procedures in general surgery, the younger surgeon trained in operations on the large bowel may wonder what a "Kraske" operation is, the surgeon particularly interested in the gastrointestinal field may affect surprise at the employment of three layers of suture in gastrointestinal anastomosis. Others may check a flaw here and there according to their own beliefs, but the present reviewer is going to leave the book just as it is and congratulate the staff of St. Mary's Hospital on their work in the operating room and in the compilation of this book. In operative surgery it is vital to hold fast to that which has been proved sound, at the same time accepting what is good as well as new. This book does both these things admirably.

Attention is called particularly to the excellent illustrations which with the help of a sympathetic surgeon should aid nurses in understanding the procedures in which they

play so vital a part. Chapter eight on the "Surgical Team" with its outline of the duties of the surgical assistants and the operating room nurses, is excellent.

To make the book perfect, any operating room supervisor or surgeon may make the few deletions and marginal additions she or he fancies—for which a short pencil sharpened only once will suffice.

* * *

VIRAL AND RICKETTSIAL INFECTIONS IN MAN—2nd Edition. Edited by Thomas M. Rivers, M.D., Director of the Hospital, Rockefeller Institute for Medical Research. J. B. Lippincott Company, Philadelphia, 1952. 719 pages with 90 illustrations, including seven plates in color, \$7.50.

The first edition of this book was a landmark in medical teaching since it was the first correlated comprehensive description of viruses, rickettsia, and the diseases caused by them which was suitable for students and practitioners of medicine. It is midway in scope between the more recent, more brief work, "Virus and Rickettsial Diseases," by Bedson and his associates, and the monumental review, "Virus Diseases of Man," by van Rooyen and Rhodes. Every student and physician should be familiar with these three books. The volume under review is most suitable for their own shelves since it contains adequate but not excessively detailed information about all phases of virus disease—clinical, microbiological, immunological, and epidemiological. In addition, it is very reasonably priced because of a subsidy from the National Foundation for Infantile Paralysis.

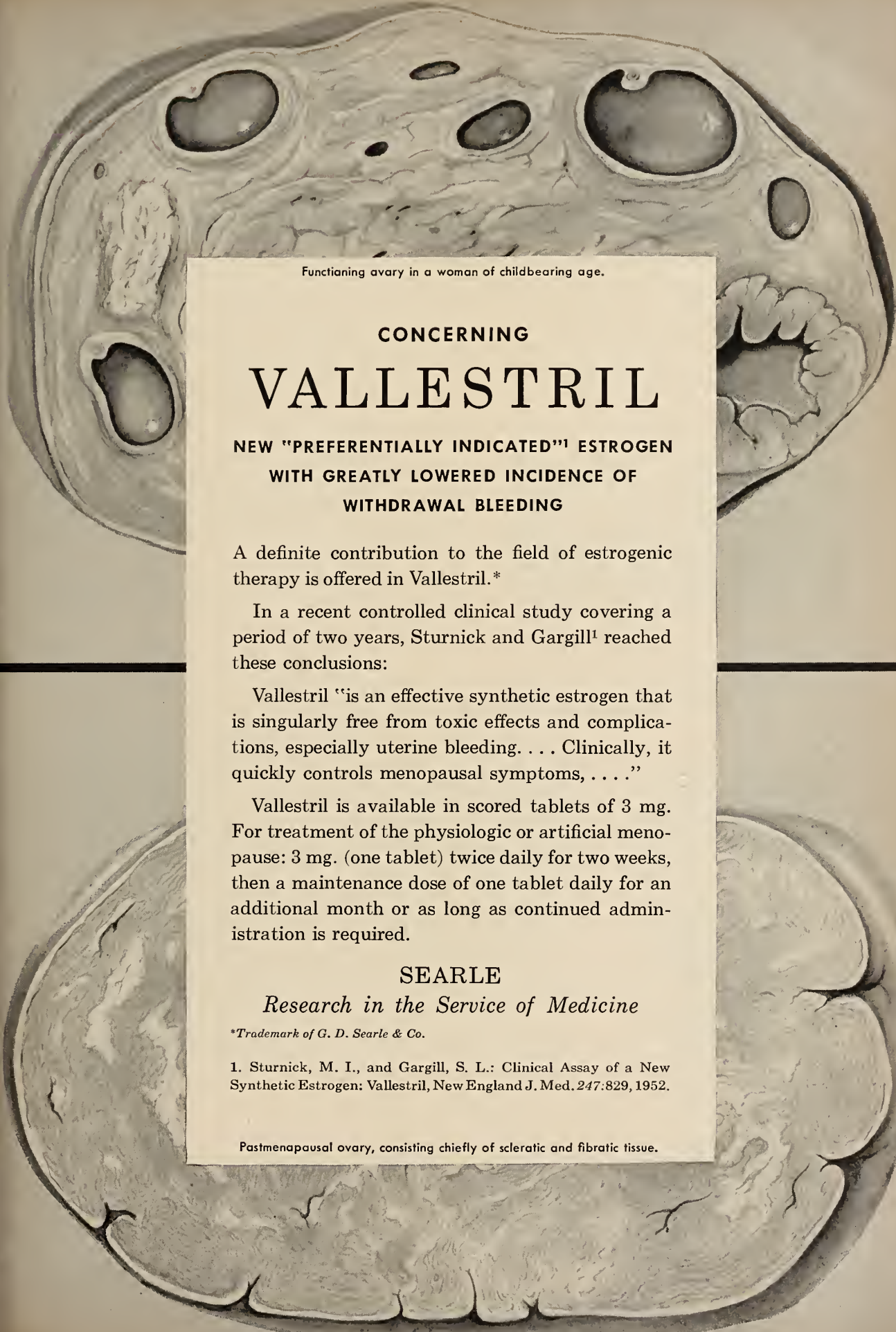
The Second Edition is 132 pages longer than the first and contains four new chapters: Hemagglutination of Viruses, Interference Between Animal Viruses, Diagnosis of Viral and Rickettsial Diseases, and the Coxsackie Group. Spot checking of many chapters reveals a substantial revision throughout the book and every important advance in knowledge with which the reviewer was familiar and for which he sought was included in the text. The chapter on poliomyelitis has been completely rewritten and includes some handsome color photographs of the pathology of the disease.

Paper, printing, and binding are of excellent quality, and the numerous illustrations are beautifully done. No typographical or errors of fact were discovered. The book may be highly recommended. Those who already own the first edition will not find sufficient new information in this volume to require replacement unless they are particularly interested in the field of virus and rickettsial disease, or responsible for teaching about it.

* * *

LOW FAT DIET COOK BOOK. Dorothy Myers Hildreth and Eugene A. Hildreth, M.D. Medical Research Press, 100 Park Avenue, New York, 1952. 148 pages, including 12 pages for notes, \$2.95.

This book is devoted entirely to suggested menus and recipes on a low fat diet. The recipes look good and any patient afflicted with a low fat diet could obtain useful information from this book. There is no point in a doctor reading it unless he just wants to look at recipes.



Functioning ovary in a woman of childbearing age.

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1. Sturnick, M. I., and Gargill, S. L.: Clinical Assay of a New Synthetic Estrogen: Vallestril, *New England J. Med.* 247:829, 1952.

Pastmenopausal ovary, consisting chiefly of sclerotic and fibrotic tissue.

Routine X-rays Aid in Discovery Of Lung Cysts

With the growing popularity of mass survey chest x-rays, an increasing number of pulmonary cysts are being discovered early, permitting surgical removal before they cause serious trouble, according to Drs. Joseph W. Gilbert, Richard T. Myers and H. H. Bradshaw, Winston-Salem, N. C. All are associated with the department of surgery, Bowman Gray School of Medicine, Wake Forest College.

"Because of the likelihood of serious complications and sequelae, recognition of pulmonary cystic disease and an appreciation of the place of surgery in its management are of considerable importance," they wrote in a recent issue of the *Journal of the American Medical Association*.

There is small surgical risk attendant to the removal of such cysts; surgical removal has great pre-

ventive medical aspects and offers the likelihood of cure or improvement, they added.

Twenty-one cases of pulmonary cysts treated surgically by the doctors between 1943 and 1950 were described in the article. These included two infants—one 13 days old and the other 14 days old.

"The results of surgery in the treatment of pulmonary cysts are gratifying," the doctors pointed out. "In this experience, there were no mortalities, and the postoperative complications were negligible. This success is attributable to the fact that cyst extirpation is restorative surgery.

"Ventilation of lung tissue is increased by elimination of compression, infection and sputum; pulmonary function almost immediately improves. The place of surgery in the management of the incidentally discovered chest lesion is emphasized in the treatment of pulmonary and mediastinal cysts."



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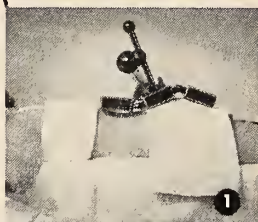
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New Doctor-Draft Bill Planned

(Continued from Front Advertising Section, Page 42)

17. Continue authority of President to recall medical, etc., reservists until July 1, 1955. Those with 12 or more months of service since June 25, 1950, would be excused.

18. Provide that reservists with 12 or more months' service since September 16, 1940, serve only 17 months.

The bill would not:

1. Specify any maximum age for liability to register. In the present law maximum age for registration is 50.

2. Take cognizance of new registrants who would fall in present priorities 1 and 2.

3. Make provision recognizing allied service in World War II retroactive.

4. Make provision permitting a reduced period of service (17 months) in certain cases retroactive; thus would not help priority 2 men.

5. Require registration of non-medical reservists.

6. Permit a reservist to keep his commission even if he wanted to.

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Assay 234; 235



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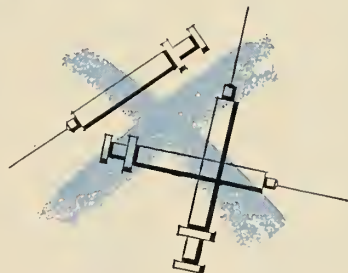


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Nearly 37,000 physicians contributed more than \$3,150,000 in direct support of medical education last year. This total, however, does not include amounts given for buildings, endowments, scholarships, research and other special purposes. Dr. Donald G. Anderson, secretary of the A.M.A.'s Council on Medical Education and Hospitals, announced that reports from 76 of the country's 79 medical schools indicate that more than 29,000 doctors gave \$2.258,-

534 directly for teaching budgets.

The American Medical Education Foundation raised \$906,553 of the total from more than 7,000 individual contributors. The A.M.E.F.'s 1953 fund-raising drive has been launched with a third gift of \$500,000 from the A.M.A. Since its organization two years ago, the Foundation has raised more than two million dollars from the medical profession for distribution "without strings attached" to medical schools.

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Removal of tattoos and freckles by abrasion with sandpaper was described in a recent issue of *Archives of Dermatology and Syphilology*, published by the American Medical Association. Dr. Ernest A. Strakosch, Denver, described the successful use of the relatively new procedure in removing tattoos from three college students and generalized freckles from a young woman.

The three students were admitted to Presbyterian

Hospital, where, in the operating room, the skin area involved was sterilized and anesthetized. The skin then was abraded with sandpaper that had been rolled around gauze rolls. After the marks had been obliterated, bandages containing an antibiotic were applied and kept in place for ten days. At the end of this period, the areas involved were healed but were of a slightly pink color; two months following treatment, the pink color of the scars had faded.

Such a procedure should be employed only by a physician at a hospital in order to prevent infection.

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BIBLIOGRAPHY

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*Vainder, M.: Ind. Med., Vol. 22, No. 4 (April) 1953.

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Gamma Globulin Distribution Plans Announced by ODM

Office of Defense Mobilization has worked out basic policy for distribution to the states of gamma globulin under non-epidemic poliomyelitis conditions.

On basic policy, ODM has decided on the following and so notified all state and territorial health officers:

1. In May each state, on request of its state health officer, will receive an initial allocation based on 40

cc. times the median number of reported cases in that state for the five-year period ending in 1951.

2. Total basic allotment for the year will be determined for each state on the basis of 40 cc. times the number of reported clinically diagnosed cases during the current year.

3. State health officers will make available to individual physicians sufficient gamma globulin to give inoculations to patients who have had intimate contact with clinically diagnosed cases. ODM is leaving up to the individual physician the determination of what is intimate contact.

(Continued on Page 67)

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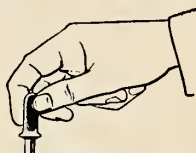
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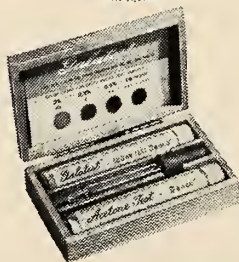
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Gamma Globulin Distribution Plans Announced by ODM

(Continued from Page 66)

The remaining major part of gamma globulin for polio will be kept in a national pool to be sent to epidemic areas when the need arises. ODM estimates total national supply of gamma globulin for polio this year at between six and seven million cc. Another two million cc. is being earmarked for measles and infectious hepatitis. ODM said the American Red Cross was packaging the serum for polio in 10 cc. vials which will be marked "Poliomyelitis Immune Globulin."



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LOS ANGELES 21

Secretary of A.M.A. Council Resigns To Become Medical Dean

Dr. Donald G. Anderson, Chicago, secretary of the American Medical Association's Council on Medical Education and Hospitals, will relinquish that position on October 1 to become dean of the University of Rochester School of Medicine and Dentistry, Rochester, N. Y., it has been announced.

Dr. Anderson was born in New York, August 2, 1913. He obtained his M.D. degree from Columbia University, College of Physicians and Surgeons, New York, in 1939. At graduation, he received the Janeway Prize, awarded to the graduate showing the highest efficiency and ability.

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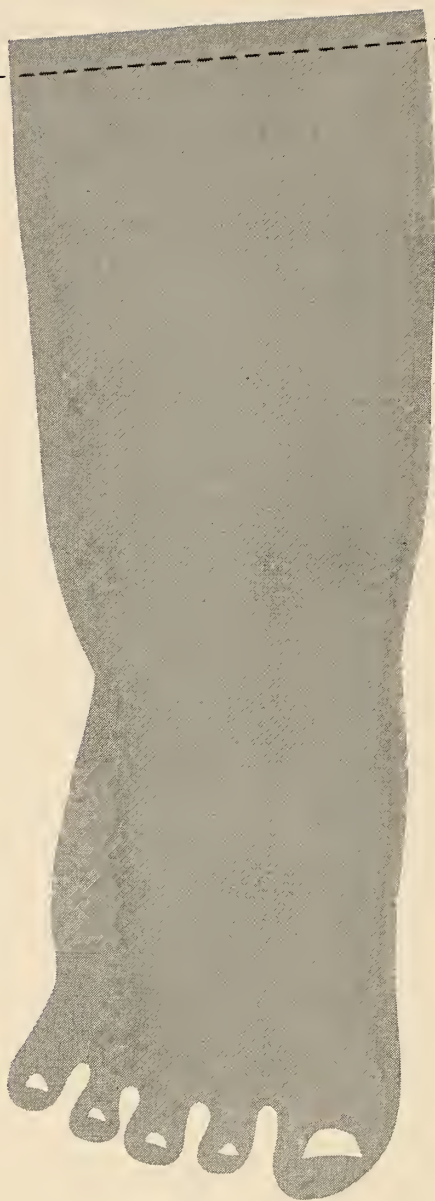
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*Stead, E. A., Jr., in Cecil, R. L., and Loeb, R. F.: Textbook of Medicine, ed. 8, Philadelphia, W. B. Saunders Co., 1951, p. 1065.

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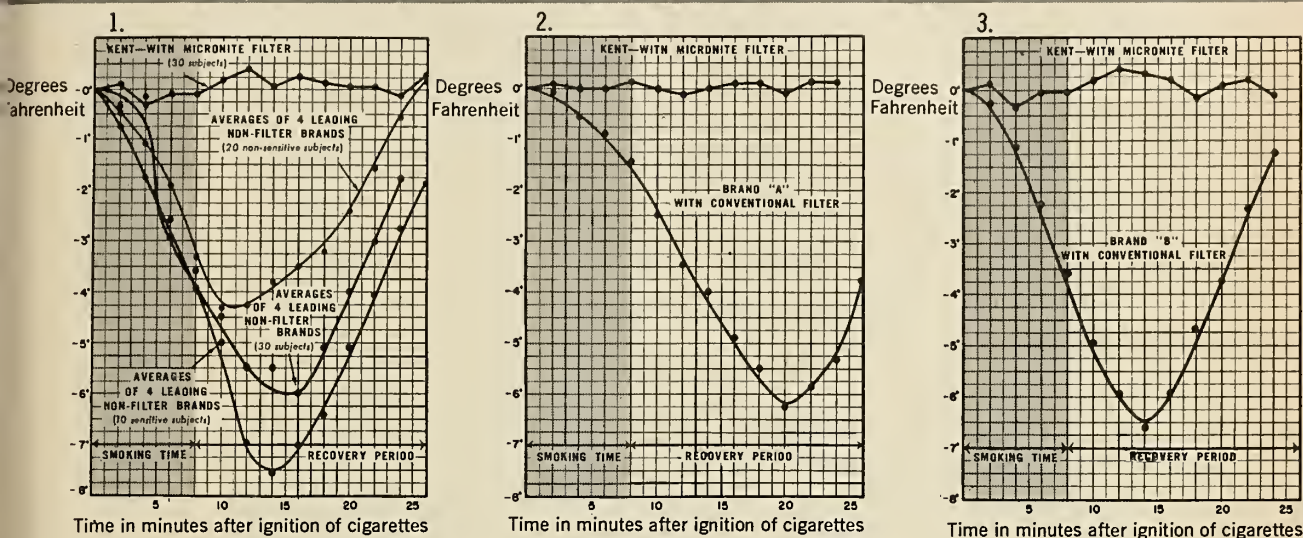


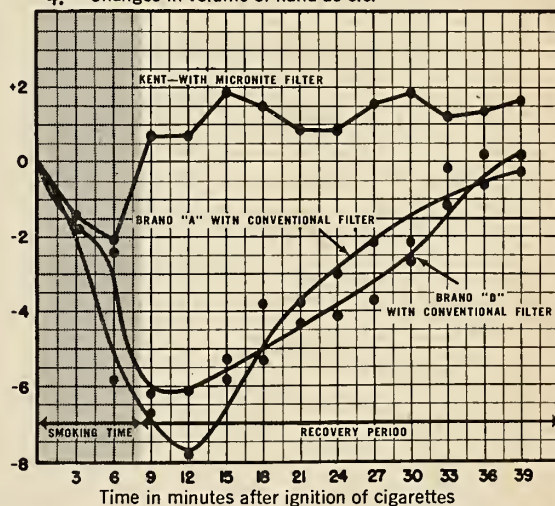
CHART 1. Comparison of KENT with leading non-filter brands. Effects on Peripheral Vascular System. Drop in surface skin temperature at the last phalanx induced by smoking one cigarette.

CHART 2. Comparison of KENT with Brand "A" conventional filter tip. Effects on Peripheral Vascular System. Drop in surface skin temperature at last phalanx induced by smoking one cigarette. Average for 15 susceptible subjects.

CHART 3. Comparison of KENT with Brand "B" conventional filter tip. Effects on Peripheral Vascular System. Drop in surface skin temperature at the last phalanx induced by smoking one cigarette. Average for 15 susceptible subjects.

CHART 4. Comparison of KENT with Brand "A" and "B" conventional filter tip. Peripheral vasoconstriction induced by smoking one cigarette. Peripheral blood flow as measured by continuous plethysmography on the hand. Average for 4 susceptible and 8 non-susceptible subjects.

4. Changes in volume of hand as c.c.



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References Cited

- A Manual of Pharmacology*, 7th Edition, Philadelphia. W. B. Saunders Co., 1949, pp. 341-352.
- J.A.M.A.*, Vol. 103, 1934, p. 318.
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Polio Protection Afforded by Gamma Globulin

Evaluation of the use of gamma globulin for immunization against poliomyelitis has disclosed that passive and temporary immunity to the disease may be obtained through its use, it was reported in a recent issue of the *Journal of the American Medical Association*.

Analysis of the use of gamma globulin on approximately 55,000 children in Texas, Iowa, Utah and Nebraska during the 1951-1952 epidemic has shown that it gives "highly significant protection against paralytic poliomyelitis," according to Drs. William McD. Hammon, Pittsburgh; Lewis L. Coriell, Camden, N. J.; Paul F. Wehrle, Pittsburgh, and Joseph Stokes, Jr., Philadelphia. Gamma globulin, a blood fraction, is now employed to prevent or modify measles and infectious hepatitis, a liver disease.

The children involved in the tests ranged in age from one to ten years. Dosage of gamma globulin administered was based on body weight. Half of the children were given injections containing the blood fraction, while the other half received injections of an inert gelatin solution. The doctors did not know until the study was completed which preparation was administered to each child. The children were studied for 14 weeks after being given the injections.

A total of 104 cases of paralytic polio occurred in the group of children studied; 31 cases occurred in the group which received gamma globulin, and 73 in the group which received the gelatin solution, the doctors reported.

"During the first week, the protection against paralytic disease was not significant, 12 or 42.9 per cent of 28 cases occurring in the gamma globulin group," they stated.

"During the second week, only three cases occurred in the children inoculated with gamma globulin, as compared to 24 among those given gelatin. This is a very highly significant difference."

Maximum protection was afforded between the second and fifth weeks after inoculation, with protection appearing to wane after the fifth week, the doctors pointed out. Between the sixth and eighth weeks, 35 per cent of all 20 cases of paralytic polio occurred in the children inoculated with gamma globulin, suggesting "that adequate protection had been lost in many children, but persisted in some." After the eighth week, no protection was detectable and an equal number of cases occurred in both groups—five.

Use of gamma globulin significantly modified the severity of the disease in those cases which occurred within a week after inoculation, the doctors reported, although it did not modify the severity of cases occurring at a later period.

The inoculations, which were given intramuscularly, did not have any effect on the localization of paralysis resulting from the disease, nor did inocu-

lations of gelatin increase the incidence of the disease, the authors concluded. No late complications or reactions resulting from the injections were seen.

"Perhaps the greatest contribution of the gamma globulin field trials is the impact it has on the status of active immunization through use of a vaccine," the doctors stated. "In these gamma globulin studies it has been demonstrated that a very low concentration of antibodies will protect man.

"In considering the usefulness of gamma globulin based on the present evidence of its value, the relative advantages must be balanced against the relative disadvantages.

"In order to protect possibly one or two persons from paralytic disease per thousand of the population that receives injections, the cost of processing the globulin alone amounts to a staggering sum."

They reported that in Houston, the cost of the globulin was approximately \$224,000, or \$28,000 for each of the calculated eight paralytic cases prevented. In Sioux City, the cost was \$112,000, or \$3,733.33 for each of the calculated 30 paralytic cases prevented.

"The use of gamma globulin is certainly not a panacea for the prevention of paralytic poliomyelitis," the doctors stressed. "In addition to problems of supply and expense, other drawbacks and disadvantages are numerous. Among these are the short duration of passive protection; the need for re-injection each time poliomyelitis becomes prevalent in the community; the extremely low incidence of paralytic poliomyelitis; the inability to determine the time of exposure and hence the optimal time to use gamma globulin; the fact that susceptible children who need protection cannot be distinguished from the immune children; the protection is not always complete, and hypersensitization may occur."

Because of the limited supply of gamma globulin, mass prophylaxis cannot be recommended except in extremely severe epidemics, the doctors pointed out. As gamma globulin will not affect the course of the disease after onset of symptoms, it should not be given to those persons who are already sick.

Blood Banking Is Banking

The California Blood Bank System operates a Clearing House for transactions between banks. When a bank draws a donor replacement it reports the necessary information to the Clearing House, which records the credit and sends a copy to the bank receiving the credit. At the close of each month the Clearing House prepares a statement for each bank showing the number of credits received and forwarded. Debts are paid by actual blood shipment as directed by the Clearing House.

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Pernicious anemia is basically a disease of older people. Although none of the aged patients depicted here may have pernicious anemia, it is very likely that all of them have deficient secretion of intrinsic factor, which in extreme cases would result in pernicious anemia. Among the many functions of the human organism which slow down as we advance in age is the stomach's secretion of intrinsic factor. Assure a full quota of intrinsic factor and its essential partner, vitamin B₁₂, for your aged patients by prescribing Bifactor. Only two tiny Bifactor tablets constitute a full U.S.P. anti-anemia unit, sufficient for maximal daily replacement of intrinsic factor and vitamin B₁₂.



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Gives New Method to Determine Lesions of Motor Nerve Cells

A simple test to determine mild lesions of the motor nerve cells of the brain even after standard methods have failed was described by Dr. Robert Wartenberg, San Francisco, in a recent issue of the *Journal of the American Medical Association*. Such lesions usually result in some form of paralysis.

Technique for performing the new test is a simple one, based on the spontaneous dropping of the knee, Dr. Wartenberg pointed out. The relaxed patient lies supine on a hard examining table. His knees are flexed so that the inner angles of the knees are slightly more than 45 degrees. Friction between the patient's heels and the surface on which they rest is reduced to a minimum by placing a metal plate under the heels and spreading talcum powder on the plate and heels.

The examiner then just waits for any changes in the horizontal level of the knees. If a lesion is present, the knee will drop evenly and steadily until the

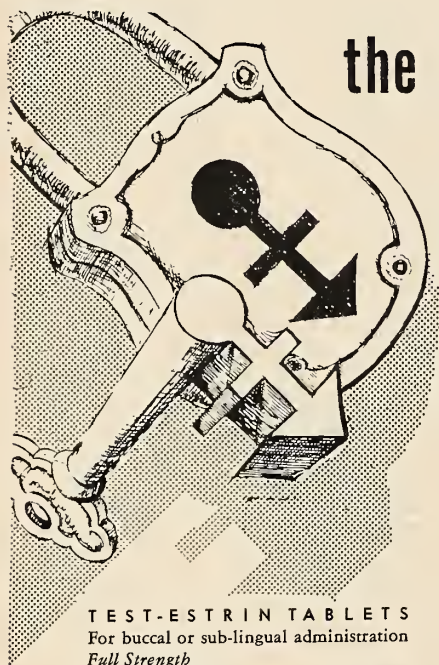
leg comes to lie flat on the surface of the table, Dr. Wartenberg stated. The lesser the lesion, the longer it takes for the knee to drop, and the slower the pace of dropping.

"The value of the knee dropping test lies in the fact that it has proved useful in uncovering cases of hemiplegia at their earliest inception," he stated.

According to Dr. Wartenberg, the test has the following advantages: (1) it is easy to perform; (2) it does not inconvenience the patient; (3) it does not require the patient's collaboration; (4) results of the test are easily interpreted; they are plainly visible, unmistakable, and unequivocal; (5) it uncovers very early the slightest defects in the motor nerves of the brain or their fibers which connect with the spinal cord; (6) in a mild lesion, the dropping occurs so slowly, evenly, and regularly that it cannot be imitated.

Dr. Wartenberg is associated with the division of neurology, University of California School of Medicine.

C. M. A. ANNUAL MEETING MAY 24-28, 1953, LOS ANGELES



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Antibiotics Proved Beneficial in Treatment of Dysentery

Three antibiotics — terramycin, aureomycin and chloramphenicol—have proved beneficial in the treatment of sulfonamide-resistant strains of acute bacillary dysentery, it was reported in a recent issue of the *Journal of the American Medical Association*.

A study of 1,408 cases of the infectious disease treated in a Korean military hospital showed that four grams of any one of the three antibiotics, given in three doses over a 24-hour period, gave satisfactory results.

“The three antibiotics, aureomycin, chloramphenicol and terramycin, were all effective therapeutic

agents, with aureomycin and terramycin slightly superior to chloramphenicol,” the article stated.

“The rapid reversion from positive to negative cultures was striking. By the seventh day, all, as with terramycin, or almost all, as with aureomycin and chloramphenicol, were culturally negative and remained so for the follow-up period.”

The article was prepared by Lieut. Bernard T. Garfinkel (MC), U. S. Army Res.; Lieut. Gerald M. Martin (MC), U. S. Navy (deceased); Dr. James Watt, Bethesda, Md.; Capt. Fred J. Payne (MC), U. S. Army Res.; Col. Richard P. Mason (MC), U. S. Army, and Dr. Albert V. Hardy, Jacksonville, Florida.

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Excellent results in the alleviation of spasticity and spasms in the legs of paraplegics, through injections of alcohol into the fluid-filled space around the spinal cord, have been reported by Dr. Stanley Stellar, New York.

Writing in a recent issue of *Archives of Neurology and Psychiatry*, published by the American Medical Association, Dr. Stellar described 12 cases in which the simple technique was used successfully. The patients suffered from a variety of spinal cord lesions of nine months' to six years' duration. They included shrapnel or gunshot wounds, intraspinal tumors and fracture of the spine. Only three of the patients had wounds that were directly incurred as the result of battle action.

The injection of alcohol into the spinal canal below the waist inactivates the nerves and relaxes the muscles in the lower portion of the body, thereby preventing further spasms. Therefore, Dr. Stellar pointed out, three basic conditions must be fulfilled before the patient is a candidate for such therapy: (1) spasticity and spasms must be severe enough to interfere with both comfort and care; (2) all voluntary motion must be absent from the waist downward; (3) the lesion must be stationary.

"With regard to spasticity, the results have been excellent in all cases," he stated. "In every patient, spasticity and superimposed spasms were severe prior to the block. There was immediate and complete relief of spasticity and spasms in the legs of all patients. The maximum follow-up period was 20 months. During this time, there was no return of spasticity in any of the patients."

Although in four patients a residual spasticity of a mild to moderate degree in the abdominal musculature was noted, Dr. Stellar said "each patient expressed himself as satisfied with what the alcohol injection had done for the relief of spasticity in his legs."

"The spasticity which all too frequently accompanies lesions of the spinal cord is itself a disabling and, in fact, an incapacitating symptom over and above the effects of the original lesions," he added. "It is highly annoying to the patient, who at any time may be thrown into a violent muscular spasm. In addition, it hinders ambulation and is an obstacle in the way of proper nursing care."

According to Dr. Stellar, toxic effects of the alcohol injections were few and slight, and those which occurred subsided easily and quickly. One patient died during the study, but death could not definitely be related to treatment, he added.

Dr. Stellar is associated with the department of neurosurgery, New York University-Bellevue Medical Center.



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ATLAS OF SKULL ROENTGENOGRAMS, AN—Bernard S. Epstein, M.D., Associate Radiologist, The Jewish Hospital, New York; and Leo M. Davidoff, M.D., Neurosurgeon, Mount Sinai Hospital, New York; Director of Neurological Surgery, The Beth Israel Hospital, New York. Lea & Febiger, Philadelphia, 1953. 415 pages, 603 illustrations on 315 engravings, \$15.00.

BODILY PHYSIOLOGY IN MENTAL AND EMOTIONAL DISORDERS—Mark D. Altschule, M.D., Assistant Professor of Medicine, Harvard Medical School. Grune and Stratton Company, New York, 1953. 228 pages, \$5.75.

CHILD DEVELOPMENT—The Process of Growing Up in Society—William E. Martin and Celia Burns Stendler, Professors of Education, University of Illinois—Under the editorship of Willard B. Spalding, Oregon State System of Higher Education. Harcourt, Brace and Company, New York, 1953. 519 pages, \$6.50.

COMROE'S ARTHRITIS AND ALLIED CONDITIONS—5th Edition—Completely revised and rewritten under the editorial direction of Joseph Lee Hollander, A.B., M.D., F.A.C.P., Associate Professor of Medicine, Chief of Division of Rheumatology Graduate School of Medicine, Associate Professor of Clinical Medicine, School of Medicine, University of Pennsylvania. Lea & Febiger, Philadelphia, 1953. 1103 pages, 399 illustrations, \$16.00.

DIAGNOSTIC TESTS IN NEUROLOGY—Robert Warthenberg, M.D. The Year Book Publishers, Inc., Chicago, 1953. 228 pages, \$4.50.

DOCTOR IN THE HOUSE—Richard Gordon—Harcourt, Brace and Company, New York, 1953. 186 pages, \$2.75.

ENCYCLOPEDIA OF ABERRATIONS—A Psychiatric Handbook—Edited by Edward Podolsky, M.D., State University of New York Medical College, Philosophical Library, New York, 1953. 550 pages, \$10.00.

FROM THE WORKSHOP OF DISCOVERIES—Otto Loewi, Research Professor of Pharmacology, New York University College of Medicine. University of Kansas Press, Lawrence, 1953. 62 pages, \$2.00.

FUNCTIONAL DISORDERS OF THE FOOT—Diagnosis and Treatment—3rd Edition—Frank D. Dickson, M.D., F.A.C.S., Clinical Professor of Surgery, University of Kansas School of Medicine; and Rex L. Diveley, A.B., M.D., F.A.C.S., Assistant Professor of Orthopedic Surgery, University of Kansas School of Medicine, J. B. Lippincott Company, Philadelphia, 1953. 345 pages, 205 figures, \$6.75.

HEADACHES—Their Nature and Treatment—Stewart Wolf, M.D., Professor and Head of the Department of Medicine, University of Oklahoma School of Medicine; and Harold G. Wolff, M.D., Professor Medicine (Neurology), Cornell University Medical College. Little, Brown and Company, 34 Beacon Street, Boston, Mass., 1953. 177 pages, \$2.50.

HORMONAL AND NEUROGENIC CARDIOVASCULAR DISORDERS—Endocrine and Neuro-Endocrine Factors in Pathogenesis and Treatment—Wilhelm Raab, M.D., F.A.C.P., F.A.C.C., F.C.C.P., Professor of Experimental Medicine and Head of Cardiovascular Research Unit, University of Vermont. The Williams and Wilkins Company, Baltimore, 1953. 722 pages, \$15.00.

HOW TO IMPROVE YOUR SIGHT—Simple Daily Drills in Relaxation—Revised Edition—Margaret Darst Corbett (Authorized Instructor of the Bates Method). Crown Publishers, Inc., 419 Fourth Ave., New York, 1953. 93 pages, \$1.50.

HYPERSPLENISM AND SURGERY OF THE SPLEEN—William Dameshek, M.D., and C. Stuart Welch, M.D., Pratt Diagnostic Hospital, New England Center Hospital and Tufts Medical College Medical School, Boston. Grune and Stratton, Inc., New York, 1953. 84 pages, \$10.00.

LIVING BRAIN, THE—W. Grey Walter. W. W. Norton and Company, Inc., 1953. 311 pages, \$3.95.

LOW SODIUM COOK BOOK, THE—Alma Smith Payne, M.A., and Dorothy Callahan, B.S., Research Dietitian, Massachusetts General Hospital. Little, Brown and Company, Boston, 1953. 477 pages, \$4.00.

MICROBIOLOGY AND PATHOLOGY—Fifth Edition—Charles F. Carter, B.S., M.D., Director, Carter's Clinical Laboratory, Dallas; and Alice L. Smith, A.B., M.D., Assistant Professor of Pathology, Southwestern Medical College of the University of Texas. The C. V. Mosby Company, 1953. 847 pages, 260 illustrations, \$5.50.

MODERN TREATMENT—A Guide for General Practice—by Fifty-three Authors—Edited by Austin Smith, M.D., Editor of the Journal of the American Medical Association; and Paul L. Wermer, M.D., Secretary, Committee on Research, American Medical Association. Paul B. Hoeber, Inc., New York. 1146 pages, \$20.00.

OPHTHALMIC SURGERY—6th Revised Edition—A Handbook of Surgical Operations on the Eyeball and Its Appendages—J. Meller—Revised by Professor J. Bock; translated and edited by Ray K. Daily, M.D., F.A.C.S., and Louis Daily, Jr., B.S., M.D., Ph.D.(Ophth.), F.A.C.S. The Blakiston Company, New York, 1953. 529 pages, \$12.00.

POLIOMYELITIS—W. Ritchie Russell, C.B.E., M.D. (Edin.), M.A.(Oxon.), F.R.C.P.(Edin.), F.R.C.P.(Lond.), Consultant Neurologist to the United Oxford Hospitals, Consultant Neurologist to the Army, Clinical Lecturer in Neurology, University of Oxford. Williams and Wilkins Company, Baltimore, 1952. 84 pages, \$3.00.

PRINCIPLES OF NEUROLOGICAL SURGERY, THE—4th Edition—Loyal Davis, M.S., M.D., Ph.D., D.Sc.(Hon.), Professor of Surgery and Chairman of the Division of Surgery, Northwestern University Medical School, Lea & Febiger, Philadelphia, 1953. 544 pages, \$8.50.

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PSYCHOSOMATIC RESEARCH—Roy R. Grinker, M.D., Director of the Institute for Psychosomatic Research and Training, Michael Reese Hospital; Clinical Professor of Psychiatry, University of Illinois College of Medicine. W. W. Norton & Company, Inc., New York, 1953. 208 pages, \$3.50.

RECURRENT DISLOCATION OF THE SHOULDER—James A. Dickson, M.D., Chief, Department of Orthopedic Surgery, Cleveland Clinic; Alfred W. Humphries, M.D., Cleveland Clinic; and Harry W. O'Dell, M.D., Chief, Department of Orthopedic Surgery, Akron Clinic, The Williams and Wilkins Company, Baltimore, 1953. 153 pages, \$1.50.

ROENTGEN, RADIUM AND RADIOISOTOPE THERAPY—A. J. Delario, M.D., Member of the American College of Radiology; American Board of Radiology; Head of Therapeutic Radiology, St. Joseph Hospital, Paterson, N.J. Lea & Febiger, 1953. 371 pages, 65 illustrations, 155 tables, \$7.50.

SHORT PRACTICE OF SURGERY, A—9th Edition—Hamilton Bailey, F.R.C.S.(Eng.), F.A.C.S., F.I.C.S., F.R.S.E., Emeritus Surgeon, Royal Northern Hospital; and R. J. McNeil Love, M.S.(Lond.), F.R.C.S.(Eng.), F.A.C.S., F.I.C.S., Surgeon, Royal Northern, Mildmay Mission, and Metropolitan Hospitals. The Williams and Wilkins Company, Baltimore, 1953. 1254 pages, with 1234 illustrations of which 272 are colored, \$12.50.

TEXTBOOK OF PUBLIC HEALTH (Formerly Hope and Stallybrass)—13th edition—W. M. Frazer, O.B.E., M.D., Ch.B., M.Sc., D.P.H., Barrister-at-Law, Gray's Inn; Medical Officer of Health, City and Port of Liverpool, Professor of Public Health, University of Liverpool, The Williams and Wilkins Company, Baltimore, 1953. 663 pages, \$8.50.

YOUR CHILD AND HIS PROBLEMS—A Basic Guide for Parents—Joseph D. Teicher, M.D., Director, Child Guidance Clinic of Los Angeles, Attending Physician (Psychiatry), Children's Hospital, Los Angeles; formerly Psychiatrist in Charge, Child Guidance Clinic, St. Luke's Hospital, New York City. Little, Brown and Company, Boston, Mass., 1953. 301 pages, \$3.75.



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M. Laurence Montgomery.....San Francisco 1953

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Wilson Stegeman.....Santa Rosa

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Arthur C. Pattison (Ex-officio) Secretary on Surgery.....1953

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The Committee on Public Relations consists of the chairmen of the following standing committees and certain general officers of the Association, all serving ex-officio.

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L. H. Fraser.....Chairman, Committee on Medical Economics
Robert A. Scarborough, Chairman

Com. on Associated Societies and Technical Groups

L. A. Alesen.....President
John W. Green.....President-Elect
J. Lefe Ludwig.....Los Angeles
Frank A. MacDonald.....Sacramento

Cancer Commission

Robert A. Scarborough.....San Francisco 1953
Clarence J. Berne.....Los Angeles 1953
Albert C. Daniels.....San Francisco 1953
John W. Cline.....San Francisco 1954
David A. Wood (Vice-Chairman).....San Francisco 1954
Paul Michael.....Oakland 1954
Ian G. Macdonald (Chairman).....Los Angeles 1955
L. Henry Garland (Secretary).....San Francisco 1955
Justin J. Stein.....Los Angeles 1955

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Axel E. Anderson (Chairman).....Fresno 1954
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*IRON	12 mg.
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MANGANESE	0.4 mg.
*PHOSPHORUS	940 mg.
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*NIACIN	6.7 mg.
PANTOTHENIC ACID	3.0 mg.
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ROSTER OF COUNTY MEDICAL SOCIETIES, CALIFORNIA MEDICAL ASSOCIATION

(County society secretaries are requested to notify California Medicine promptly when changes are indicated in their roster information.)

Alameda-Contra Costa Medical Assn., 354-21st Street, Oakland 12. Meets Third Monday, 8:15 p.m., Hunter Hall, Oakland.

Pres., Lester B. Lawrence, 2976 Summit St., Oakland 9.

Secy., Grant Ellis, 2298 Durant Ave., Berkeley.

Butte-Glenn Medical Society. Meets Second Thursday.

Pres., Donald J. Casey, 341 Broadway, Chico.

Secy., J. O. Chiappella, Paradise.

Fresno County Medical Society. 616 Security Bank Building, Fresno. Meets Second Tuesday, 6:30 p.m., Sunnyside Country Club.

Pres., William N. Knudsen, 701 Patterson Bldg., Fresno.

Secy., Joseph A. Logan, 1330 Wishon, Fresno.

Humboldt County Medical Society. Meets First Thursday.

Pres., E. Kenneth Smith, 1007 14th St., Eureka.

Secy., John W. Schonwald, 2828 E St., Eureka.

Imperial County Medical Society. Meets Second Tuesday, 8 p.m., Pioneer Memorial Hospital, Brawley.

Pres., George M. Cole, 528 G St., Brawley.

Secy., Ernest Brock, 200 South Imperial, Imperial.

Inyo-Mono County Medical Society. Meets Fourth Tuesday except December, January, February.

Pres., J. Carl Cummings, 429 N. Edwards St., Independence.

Secy., Robert W. Denton, 611 W. Line, Bishop.

Kern County Medical Society. 1300 Chester Avenue, Bakersfield. Meets Third Tuesday, 7:30 p.m., Stockdale Country Club except June, July, August.

Pres., John E. Vaughan, 2109 18th Street, Bakersfield.

Secy., Lester S. Gale, 614 Bernard Street, Bakersfield.

Kings County Medical Society. Meets Second Monday, 8:00 p.m., Legion Hall, Hanford.

Pres., Paul R. Brother, 501 E. Madera, Avenal.

Secy., Willard S. Bridwell, 603½ North Irwin St., Hanford.

Lassen-Plumas-Modoc County Medical Society. Meets on call.

Pres., Robert A. Greenman, Chester.

Secy., Roy M. Peters, Portola.

Los Angeles County Medical Assn., 1925 Wilshire Blvd., Los Angeles 5. Meets First and Third Thursdays, 1925 Wilshire Blvd., Los Angeles.

Pres., Paul D. Foster, 1930 Wilshire Blvd., Los Angeles 5.

Secy., Ewing L. Turner, 1930 Wilshire Blvd., Los Angeles 5.

Madera County Medical Society.

Pres., Kenneth W. Butler, 133 E. Yosemite Ave., Madera.

Secy., Herbert Weinberger, 115 South A St., Madera.

Marin County Medical Society. Meets Meadow Club of Talmage, Fourth Thursday of every month, 7:00 p.m.

Pres., Edward Campion, 1018 E St., San Rafael.

Secy., Wm. Burgett Smith, 711 "D" St., San Rafael.

Mendocino-Lake County Medical Society.

Pres., Duane W. Bradley, Box 346, Kelseyville.

Secy., Olga A. Miller, Box X, Talmage.

Merced County Medical Society. Meets Fourth Thursday, Hotel Tioga, Merced.

Pres., Edwin M. Soderstrom, Merced Clinic, Merced.

Secy., John East, 652-20th St., Merced.

Monterey County Medical Society. Meets First Thursday.

Pres., H. M. Stufflebam, 11 Maple St., Salinas.

Secy., Horace F. Husser, 14 E. Romie Lane, Salinas.

Napa County Medical Society. Meets Second Wednesday.

Pres., Fred D. Heegler, 2030 Jefferson St., Napa.

Secy., Merle F. Godfrey, 1519 Jefferson St., Napa.

Orange County Medical Association. 1226 N. Broadway, Santa Ana. Meets First Tuesday, 7:00 p.m.

Pres., E. F. Cain, 200 N. Palm St., Anaheim.

Secy., Chad M. Harwood, 1202 North Broadway, Santa Ana.

Placer-Nevada-Sierra County Medical Society. Meets every second Wednesday of each month.

Pres., Carl R. Jackson, DeWitt State Hospital, Auburn.

Secy., Thomas J. Rossitto, 1166 High Street, Auburn.

Riverside County Medical Association. Meets Second Monday, 8:00 p.m., El Loro Room, Mission Inn.

Pres., Fred D. Lord, 4060 Orange St., Riverside.

Secy., John S. O'Toole, 3616 Main St., Riverside.

Sacramento Society for Medical Improvement. 2731 Capitol Avenue, Sacramento. Meets Third Tuesday, 8:30 p.m., Sutter Hospital Auditorium.

Pres., Charles E. Grayson, 1215 Twenty-eighth Street, Sacramento.

Secy., Frank G. Schiro, 2909 J Street, Sacramento.

San Benito County Medical Society. Meets First Thursday, Hazel Hawkins Memorial Hospital, Hollister.

Pres., David G. Young, Jr., 535 Monterey St., Hollister.

Secy., Gurdon L. Bradt, 1025 San Benito Street, Hollister.

San Bernardino County Medical Society. Meets First Tuesday, 8:00 p.m., San Bernardino County Charity Hospital.

Pres., C. Norman Abbott, 125 West F Street, Ontario.

Secy., Carl M. Hadley, 315 Platt Building, San Bernardino.

San Diego County Medical Society. 101 Medical-Dental Bldg., San Diego 1. Meets Second Tuesday, Manor Hotel.

Pres., Ralph M. King, 8453 La Mesa Blvd., La Mesa.

Secy., W. H. Geistweit, Jr., 810 Medico-Dental Bldg., San Diego 1.

San Francisco Medical Society. 2180 Washington Street, San Francisco 9. Meets Second Tuesday, 8:15 p.m., 2180 Washington Street, San Francisco 9.

Pres., Edmund J. Morrissey, 450 Sutter St., San Francisco 8.

Secy., Herbert C. Moffitt, Jr., 909 Hyde St., San Francisco 9.

San Joaquin County Medical Society. Meets First Thursday, 8:15 p.m., American Trust Building, Stockton.

Pres., Emil Gough, 127 East Acacia Street, Stockton.

Secy., Frank A. McGuire, Medico-Dental Building, Stockton.

San Luis Obispo County Medical Society. Meets Third Saturday, 7:00 p.m., Golden Dragon Cafe, San Luis Obispo.

Pres., Jim Scow, 717-17th St., Paso Robles.

Secy., John H. Woodbridge, 891 Pismo Street, San Luis Obispo.

San Mateo County Medical Society. 235 Third Avenue, San Mateo. Meets Third Tuesday of each month.

Pres., Alf T. Haerem, 500 Arguello, Redwood City.

Secy., Jackson T. Flanders, 348 Broadway, Redwood City.

Santa Barbara County Medical Society. 300 West Pueblo St., Santa Barbara. Meets Second Monday, Cottage Hospital.

Pres., Walter C. Graham, 1421 State St., Santa Barbara.

Secy., Arthur E. Wentz, 103 E. Micheltorena, Santa Barbara.

Santa Clara County Medical Society. 1024 The Alameda, San Jose 26. Meets Third Monday of every month.

Pres., George W. Waters, 101 Race St., San Jose.

Secy., Dan Brodovsky, St. Claire Bldg., San Jose.

Santa Cruz County Medical Society. Meets every Second month, Second Tuesday. Time, place to be announced.

Pres., Philip E. Karleen, Soquel.

Secy., Samuel B. Randall, 230 Walnut Street, Santa Cruz.

Shasta County Medical Society. Meets First Monday.

Pres., Louis Nash, 1440 Market St., Redding.

Secy., Henry R. Eagle, 1348 Market St., Redding.

Siskiyou County Medical Society. Meets Sunday on call.

Pres., J. W. Reynolds, 420 Florence Ave., Dunsmuir.

Secy., E. V. Anderson, Corwin Bldg., Dunsmuir.

Solano County Medical Society. Meets Second Tuesday, 8:00 p.m., Casa de Vallejo Hotel, Vallejo.

Pres., Milton B. Smith, 1234 Empire St., Fairfield.

Secy., Herbert L. Joseph, 607 Carolina, Vallejo.

Sonoma County Medical Society. 300 American Trust Bldg., Santa Rosa. Meets Second Thursday.

Pres., Carl E. Anderson, 1150 Montgomery Dr., Santa Rosa.

Secy., Frank E. Lones, 300 American Trust Bldg., Santa Rosa.

Stanislaus County Medical Society. Meets Third Thursday, 7 p.m., Hotel Hughson, Modesto.

Pres., Robert Barker, 814-14th St., Modesto.

Secy., J. Lyle Spelmann, 140 McHenry Ave., Modesto.

Tehama County Medical Society. Meets at call of President.

Pres., E. W. Wilson, 737 Washington, Red Bluff.

Secy., James L. Faulkner, 420 Pine St., Red Bluff.

Tulare County Medical Society.

Pres., Robt. D. Karstaedt, P.O. Box 1311, Porterville.

Secy., Vincent Dungan, 217 S. Willis, Visalia.

Ventura County Medical Society. Meets Second Tuesday, 7:15 p.m., Colonial House, Oxnard.

Pres., James M. Hunter, 1590 E. Main St., Ventura.

Secy., Franklin K. Helbling, 34 N. Ash Street, Ventura.

Yolo County Medical Society. Meets First Wednesday.

Pres., Robert A. Burns, Woodland Clinic Hospital, Woodland.

Secy., Richard J. Cundiff, Woodland Clinic, Woodland.

Yuba-Sutter-Colusa County Medical Society. Meets Second Tuesday.

Pres., Wm. J. Vasquez, 801-4th St., Marysville.

Secy., Robt. I. Hodgins, 729 D St., Marysville.

(For roster of C.M.A. committees and other organizations, see last month's issue.)

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1. Reich, C., and Mulinos, M. G.: Treatment of Refractory Nutritional Anemia with Gelatine. Bull. N. Y. Med. Coll. March 1953.

2. Whipple, G.H., and Robscheit-Robbins, F.S.: Amino Acids and Hemoglobin Production in Anemia, J. Exper. Med. 71:569, 1940.

3. Shemin, D., and Rittenberg, D.: Utilization of Glycine for the Synthesis of the Porphyrin, J. Biol. Chem. 159:567, 1945; The Biological Utilization of Glycine for the Synthesis of the Protoporphyrin of Hemoglobin, J. Biol. Chem. 166:621, 1946.

4. Grinstein, M., Kamen, M., and Moore, C.V.: The Utilization of Glycine in the Biosynthesis of Hemoglobin, J. Biol. Chem. 179:359, 1949.

5. Graff, J., and Hoverman, H.D.: On the Metabolism of Beta-Alanine, J. Biol. Chem. 186:369, 1950.



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Participation Urged in World Medical Association

Physicians have a great stake in world medicine, and should aid in further improvement of world health by participation in the World Medical Association.

This opinion was expressed by Dr. Louis H. Bauer, Hempstead, N. Y., president of the American Medical Association and secretary-general of the W.M.A., following a recent trip to five European countries and to a meeting of the World Medical Association in Portugal.

While no individual can belong to the W.M.A., in the United States and several other countries, supporting committees have been established in which individual membership is possible, Dr. Bauer stated. In the United States there has been formed the World Medical Association, United States Committee, Inc., a non-profit organization in which medical societies, business organizations, and individuals may become members. By participation in the group "we can have an effective voice in international medical affairs, a voice that is sadly needed," he added.

The World Medical Association is an organization of the national medical association and represents the practicing profession of the world, Dr. Bauer wrote in a recent issue of the *Journal of the American Medical Association*. It is supported entirely by dues and voluntary contributions, and there is only one member per country. Forty-three nations, with a physician representation of 700,000, are now members of the association; no countries behind the iron curtain are represented.

According to Dr. Bauer, the aims of the World Medical Association are to effect a better liaison among the doctors of the world; to serve as a forum for discussion of mutual problems; to disseminate information; to raise the standards of health, medical education and medical care throughout the world; to represent the practicing profession before other international bodies, when matters of health and medicine are discussed, and to give the average doctor a voice in international affairs; and to improve international relations.

There are many reasons why doctors should have an interest in the W.M.A.. Dr. Bauer stated, adding:

"First of all, an increasing number of problems relating to health and medicine are being discussed and decided on an international level. Most of the bodies discussing these problems have one viewpoint only, and that is the viewpoint of government. Without the World Medical Association, there is no one to present the opinions of practicing physicians.

"We are indeed fortunate in the United States that government has not made the inroads on the practice of medicine that it has in many other countries.

(Continued on Page 16)

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Participation Urged in World Medical Association

(Continued from Page 10)

Canada and the United States are the freest countries in the world as far as medical practice is concerned, and both countries intend to keep it that way. One way we can help accomplishing that objective is by cooperating with other countries and fighting the inroads of socialism via the international route.

"Another great contribution to the welfare of medicine by the World Medical Association is the

sponsorship of the First World Conference on Medical Education, which was held in London, April 22-29, 1953. Medical education is long overdue for a reassessment. This conference gave the practicing physician an opportunity to state how medical education has met or failed his needs.

"In addition to this, the W.M.A.'s studies in the field of the medical aspects of social security, standards of hospitals, the development of an international code of medical ethics, its stand with reference to an international pharmacopeia, and its continuing fight to protect the rights and privileges of

(Continued on Page 17)

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Participation Urged in World Medical Association

(Continued from Page 16)

doctors in both peace and war are further examples of its importance.

"Most important of all, however, is the ability of the World Medical Association to speak for the practicing profession. Too often the profession is ignored in deciding matters of moment to both the profession and the public.

"Six years of experience with doctors of other nations has shown me conclusively that the same problems face the profession in all countries. They differ only in degree. That, perhaps, is not surpris-

ing. What is surprising is that doctors all over the world think alike about these problems, differing only as to details."

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Anesthetic in Hospital.....	10.00	20.00	30.00	40.00
X-Ray in Hospital.....	10.00	20.00	30.00	40.00
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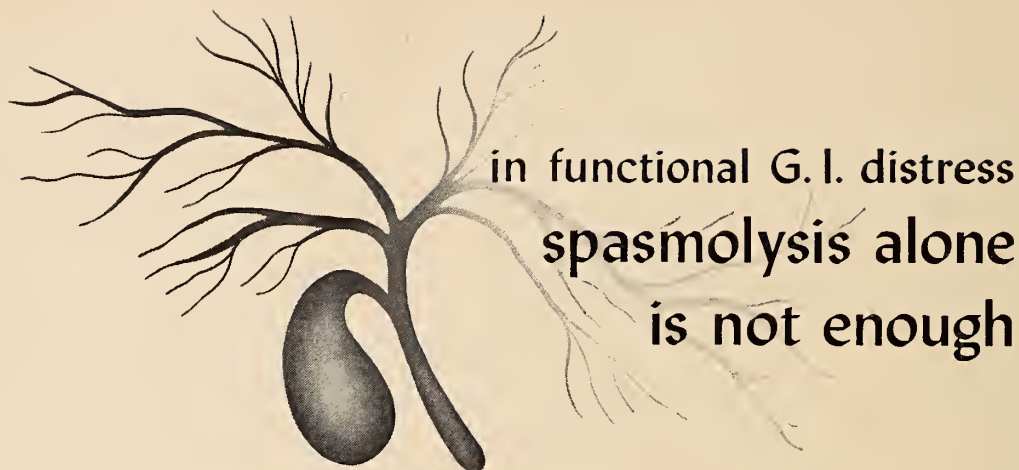
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Children's Shoes Must Fit Properly For Health's Sake

You can put your best foot forward only when your feet have been properly shod.

The proper fitting of shoes should begin with a child's first pair, as correctly fitting shoes are essential both for health and comfort, according to Dr. Louis Starr, Brooklyn. Dr. Starr is associated with the department of orthopedic surgery, New York University College of Medicine, New York.

"The normal foot requires no support from shoes," Dr. Starr wrote in an article discussing children's footwear in a recent issue of the *Journal of the American Medical Association*. "The shoe, therefore, should be pliable and interfere as little as possible with the action of the foot.

"A weak foot is a foot that on weight-bearing changes its shape and contour more than normal. The accepted orthopedic treatment is to support such a foot throughout the growth period of childhood.

"A proper shoe fit is essential for foot health. Poorly fitting shoes are uncomfortable. They wear out more rapidly. They may result in deformities of the foot."

An infant should start to wear shoes as soon as he maneuvers about to any considerable extent outside the playpen, Dr. Starr stated. However, if an infant has weak feet, he should wear adequate shoes as soon as he is able to draw himself up into a standing position.

High shoes are preferable for infants as they are easier to keep on, he added. Older children should be fitted with low shoes, as they are cooler and dryer and afford adequate protection.

"Shoes should not be bought from a mail-order house or off the counter," he said. "A good fit is difficult to obtain in this way. A shoe store should not have a fluoroscope. No regulations can make shoe fluoroscopy safe. A competent shoe salesman can achieve a good fit without resorting to shoe fluoroscopy."

Children's feet often grow in spurts, and a child may wear out his shoes before he outgrows them, Dr. Starr said. Shoes should not be bought by size, as different lasts and makes may require different sizes. When purchased, a new pair of shoes should be one-half to three-quarters of an inch longer than the foot and should fit snugly all around the foot.

Dr. Starr said that placing metal taps on the soles or heels of children's shoes may prevent rapid wear, but they increase the tendency to a clicking sound, are slippery and may cause a fall. Although more than one pair of shoes is not necessary, it is desirable for a child to have two pairs, he stated. When worn on alternate days, the shoes will dry out more completely.

"Another point of concern for parents is whether the child should be permitted to walk barefoot," he

(Continued on Page 30)

Civil Defense Should Plan to Include Disaster Feeding

Civil defense planning in this country often overlooks the importance of disaster feeding, Dr. James M. Hundley, Bethesda, Md., wrote in a recent issue of the *Journal of the American Medical Association*.

"Emergency feeding is much more than just a means of providing nourishment for those unable to provide for themselves," he stated in a report prepared for the A.M.A.'s Council on Foods and Nutrition. "It constitutes a powerful tool for calming disturbed and even panic-stricken persons. Its effect on morale is probably more important than its physiological effects, especially in the first days of the disaster. These facts are often overlooked in civil defense planning in this country."

In times of disaster a high priority should be given to the provision of an emergency supply of drinking water, as the lack of it will produce death far more quickly than a complete lack of food, Dr. Hundley stated. However, a cup of hot coffee or warm food from a functioning emergency feeding group has a great psychological impact since it "constitutes tangible proof that the community is still functioning, that others are not fleeing in panic, and that doomsday has not yet arrived," he added.

Nutritional factors in disaster feeding are not too important, generally speaking, as it is unlikely that anyone will be dependent upon emergency feedings for more than 30 days and nutritional deficiencies will not develop within such a short period of time, according to Dr. Hundley. The first need of adults in the hours after the disaster is a cup of hot coffee; infants and children should be provided with milk.

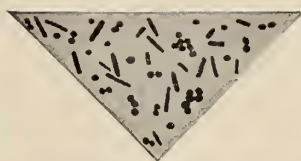
"The food served should be primarily designed to allay hunger and sustain morale rather than to fit any rigid nutrition standard," he said. "The foods provided for emergency feeding should be familiar, well-liked foods with a high general acceptability. The importance of this cannot be over-emphasized. People in disasters are in a state of stress. Stressed individuals tend to reject unliked or unfamiliar foods much more readily than they would under normal circumstances.

"Adequate feeding will aid in preventing post-traumatic neurosis, tend to reduce the numerous injuries inherent in any mass panic reaction, and assist the afflicted population to a maximum of self-help."

Other problems in emergency feeding will arise as a result of the numerous casualties which must be expected in disasters, Dr. Hundley pointed out. These feedings must be done in medical installations, under medical control, and usually on an individual basis. The feeding problems among the casualties will vary, he added, and further intensive research is being conducted to determine the best type of such emergency feedings.

(Continued on Page 32)

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†Quinn, L. H., and Burnside, P. M., *Eye, Ear, Nose & Throat Monthly*, 30:81, Feb., 1951.

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Children's Shoes Must Fit Properly For Health's Sake

(Continued from Page 22)

said. "In the house, barefoot walking should be at a minimum. A child may be allowed to walk barefoot in the sand or on the grass. This is excellent exercise for foot and toe muscles.

"A related question is whether the child should wear slippers. They are a convenient hygienic measure provided they are limited to use for which they are intended. They should not be used just because the child is in the house. They should not be used when the child is allowed up and about the house during convalescence from an illness.

"Sneakers are another type of footwear that parents ask about. Sneakers are very flexible and are ideal for athletic activities such as in the gymnasium and on the tennis court. They are not intended for use all through the day, and they are not intended to replace shoes. They may be worn for limited periods of time when a child is indulging in some athletic pursuit."

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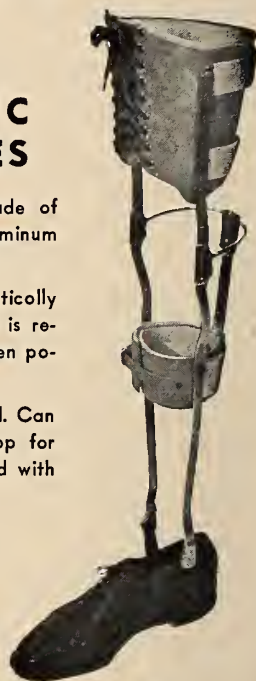
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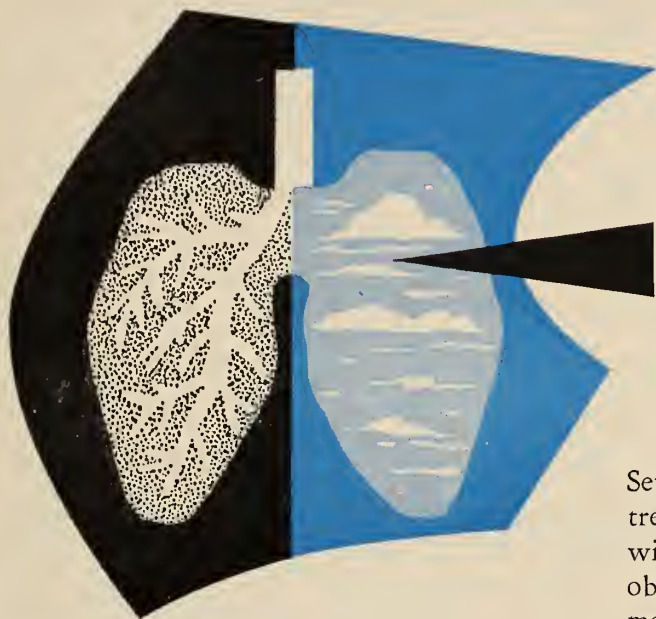
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PHYSIOLOGIC THERAPEUTICS THROUGH BIORESEARCH

Civil Defense Should Plan to Include Disaster Feeding

(Continued from Page 22)

Infants, children, pregnant women, nursing mothers, essential workers, and persons with such chronic illnesses as peptic ulcers, tuberculosis and diabetes pose still other problems in disaster feedings, according to Dr. Hundley. Those persons with chronic illnesses are urged to keep at least a week's supply of medications on hand to tide them over the period when special foods may not be obtainable. Those

engaged in essential operations demanding a high level of physical output under difficult conditions should receive special rations.

Should a prolonged emergency of months or years arise, nutrition standards must be considered in much more detail than the short-term disaster feeding allowances, he stressed, adding:

"Specific nutritional deficiencies will develop, and morale and work output will decline during these longer periods if the diet is quantitatively or qualitatively inadequate."

(Continued on Page 33)

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Civil Defense Should Plan to Include Disaster Feeding

(Continued from Page 32)

Dr. Hundley is chief of the laboratory of biochemistry and nutrition, National Institutes of Health, Public Health Service, Federal Security Agency, and consultant on nutrition, Health and Special Weapons Division, Federal Civil Defense Administration.

Smoking Causes Asthma-Like Condition

An asthma-like condition caused by smoking was described in a recent issue of the *Journal of the American Medical Association*.

Thirty-one patients afflicted with manifestations of the condition were reported by Dr. George L. Waldbott, a Detroit allergist. The patients, 20 men

(Continued on Page 40)

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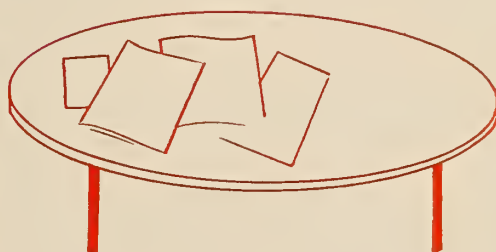
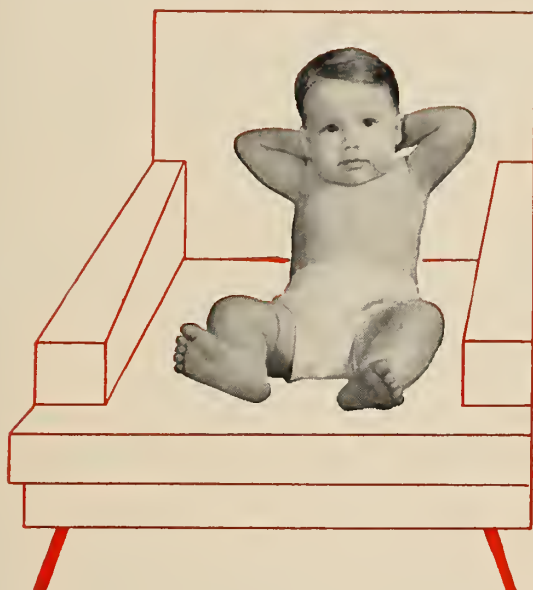
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Smoking Causes Asthma-Like Condition

(Continued from Page 33)

and 11 women ranging in age from 28 to 72 years, suffered such symptoms as wheezing, cough and expectoration, chronic inflammation of the pharynx, labored breathing on exertion, constriction in the chest, frequent and acute sore throats, and a tendency toward upper respiratory infections.

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stances, its resumption precipitated a recurrence of the condition.

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Smoking Causes Asthma-Like Condition

(Continued from Page 40)

ally believed that the mucous membranes of some persons manifest a greater tolerance to these irritants than those of other persons.

"I believe that the 'smoker's asthma' syndrome is not rare, although its relation to smoking is not always easy to prove."

Dr. Waldbott pointed out that it is possible that "smoker's asthma" may contribute to the development of permanent pulmonary changes that will reduce the efficiency of the lungs.

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(Continued in Back Advertising Section, Page 54)

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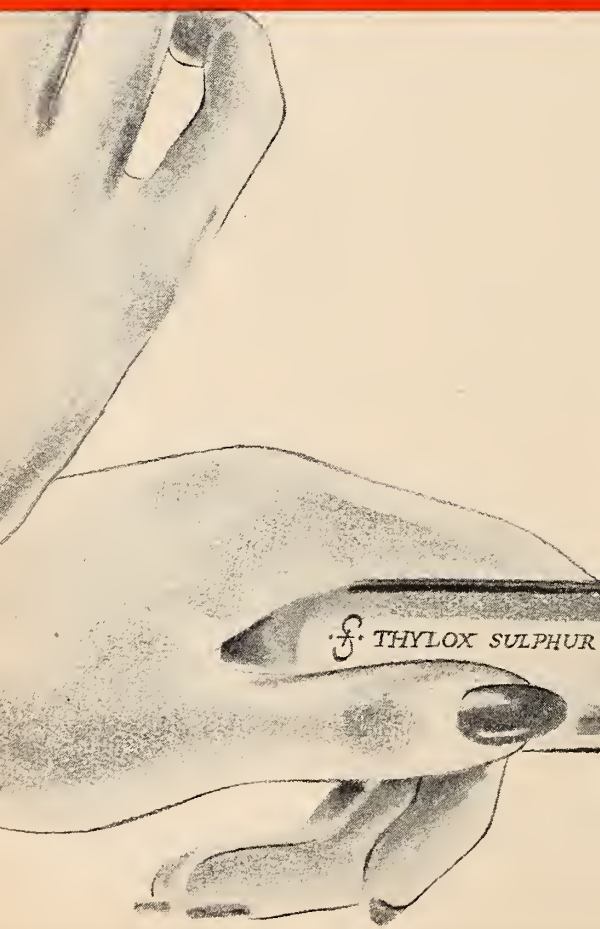
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References: 1. Lehr, D.: Brit. M. J. 2:543-548, 1948. 2. Lehr, D.: Brit. M. J. 2:601, 1950. 3. Hawking, F., and Lawrence, J. S.: The Sulfonamides, New York, Grune and Stratton, 1951.

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Well, go and have fun, and don't worry about your health. For, if you follow a few, simple, time-tested rules and suggestions, you can have a happy, healthy trip, according to Dr. E. O. Nichols, Jr., Plainview, Texas.

Health questions which may arise regarding a European trip and their solutions were given by Dr. Nichols in a recent issue of *Today's Health* magazine, published by the American Medical Association. The conclusions were based on Dr. Nichols' own experiences during a three-month trip through nine European countries.

Before departing for Europe, it is necessary to have a smallpox vaccination, as the United States demands a certificate indicating that you have been vaccinated within three years of your reentry into the country, Dr. Nichols pointed out. He also recommended immunization against typhoid and paratyphoid and immunization of children against diphtheria.

Have your physician aid you in preparing a small medical kit before leaving on your trip, he added. Included in the kit should be a pain-killer such as aspirin, a mild sedative, a motion sickness preventive, a preparation to alleviate food poisoning or eating indiscretions, and one of the major antibiotics to counteract any real infection which may occur.

"If you have any physical disability or a medical past that might become a clinical future, be certain you get a transcript of your record from your doctor," Dr. Nichols said. "It might prove invaluable, especially in places where English is poorly understood; for the written language of medicine is almost international, and much easier to understand than your own halting explanation."

A thorough physical examination prior to leaving also was recommended by Dr. Nichols, as was the taking of an extra pair of dentures and glasses.

There is little medical preparation necessary for the time in transit to Europe, he stated, as boats have first-class health facilities. If you have a heart condition, check with your physician before planning to fly to your destination.

For any real illness that occurs while in Europe, use caution in obtaining medical care, Dr. Nichols stressed. The United States consul will be able to direct you to a well-trained physician. If a specialist is needed, you should ask your doctor to call in one of the professors at a nearby university for consultation.

Europe's pharmacies contain not only most American products, but also are loaded with a wide variety of excellent European ones, he stated, adding:

"Hence, do not worry; satisfactory medical care is always available to the traveler in Western Europe."

California M E D I C I N E

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Volume 78

JUNE 1953

Number 6

Corticotropin (ACTH) and Cortisone

Newer Concepts of Their Use in Clinical Practice

LAURANCE W. KINSELL, M.D., LENORE BOLING, M.D.,
JOHN W. PARTRIDGE, M.D., and NADINE FOREMAN, M.D., Oakland

AFTER THREE YEARS of clinical application of corticotropin (ACTH) and cortisone, certain questions urgently require specific answers. Among these questions are the following:

1. What is the status of patients with rheumatoid arthritis who have been treated with corticotropin and/or cortisone for periods of more than two years?

2. In chronic conditions such as arthritis and asthma, what represents an optimal long-range program for therapy—that is, should one use completely suppressive therapy or minimal dosage; continuous or intermittent treatment?

3. In conditions known to be fatal in almost all cases (such as lupus erythematosus and pemphigus) in which corticotropin/cortisone are known to produce favorable effects, is such benefit only transient?

4. Is there any place for the use of the hormones in the treatment of patients with severe infectious diseases of known cause?

5. How much concern should there be as to the "untoward effects" of corticotropin and cortisone? Can these effects be favorably modified or prevented by dietary or other measures?

• *On the basis of three years' experience with corticotropin and cortisone, it seems probable that the place of these hormones in clinical medicine will be one of increasing importance. At present they may be used to attain certain specific objectives:*

1. *To return a large number of chronic invalids to a place of full activity in the community. This applies particularly to patients with rheumatoid arthritis and bronchial asthma. Many years of continuous therapy will be required in the majority of such patients.*

2. *As life-saving agents in patients with certain diseases of unknown etiologic delineation that almost always cause death. In some patients treated for some of those diseases, therapy may eventually be discontinued.*

3. *As life-saving agents (in conjunction with intensive antibiotic therapy) in patients with severe infections inadequately responsive to chemotherapy alone.*

Many of the untoward effects of hormonal therapy may be minimized or prevented by appropriate adjuvant measures.

From the Institute for Metabolic Research of the Highland Alameda County Hospital, Oakland.

Dr. Partridge was Schering Research Fellow in Endocrinology, 1950-52.

Original work here reported has been supported in part by grants from the National Institutes of Health and the Armour Laboratories.

There is considerably less than unanimity of answers to any of those questions. In this presentation attempt is made to supply as definite answers

as possible based upon the experience of the authors. Where the evidence is equivocal or controversial, this will be indicated.

Status of Arthritic Patients Treated Continuously with Corticotropin/Cortisone for Periods of More Than Two Years

The authors' experience with such patients may be different in some respects from that of other groups who have had extensive experience with the use of the hormones, in that more than one-third of the patients who have been treated have been selected from the standpoint of suitability for prolonged metabolic study. Consequently the majority of patients have had a reasonably high level of intelligence and of emotional stability. Twenty-eight such patients have been observed. All initially received a sufficient amount of hormonal therapy to bring about complete disappearance of signs and symptoms of active rheumatoid arthritis. Dosage was then gradually decreased as the patient's condition permitted. In the majority of instances, sufficient hormones were administered at all times to keep the erythrocyte sedimentation rate normal, and to eliminate all evidence of active joint inflammation. Of the total, 16 have been returned to full activity and are maintained on an average dosage of 6 mg. of corticotropin gel twice daily, or 50 mg. of cortisone daily, or a combination of the two. Five others are free of active arthritis on relatively small dosage of hormones but are unsuited for employment because of irreversible joint deformity. In the rest of the cases there is variation from fair control to poor control of active arthritis with the patients receiving variable amounts of corticotropin. In most patients in the latter category, the lack of adequate response is referable to the appearance of major untoward effects of corticotropin and cortisone, extreme emotional instability in particular, necessitating reduction of dosage to amounts too small to maintain complete remission. Some of these patients are able to carry on a reasonable amount of useful activity.

In no instance has it been possible to completely discontinue hormonal therapy but the rate of decrease of dosage in several cases leads to the hope that eventually this will be possible.

Pros and Cons of "Optimal" Long-Term Therapy in Chronic Disabling Illness, Such as Rheumatoid Arthritis and Severe Non-Seasonal Bronchial Asthma

Ideal therapy in any disease state is that which will totally eradicate the causative agent. In both rheumatoid arthritis and severe "non-specific" bronchial asthma, precise pathogenesis is poorly understood. Hence any treatment at present available is less than "ideal."

If corticotropin/cortisone therapy is used in either disease, the treatment will be based upon one of two philosophies:

1. *Use as "super-aspirins."* Before the advent of corticotropin and cortisone, acetylsalicylic acid was considered the most valuable single pharmacologic agent by many able and conservative rheumatologists. Administered in sufficient dosage, it brought about rather pronounced relief in many arthritic patients. Since the hormones are in no sense "curative agents" it might be wondered whether, in terms of net effect, they are not merely "super-aspirin." If so, they would be administered in the smallest dosage that would effect relief from pain and improvement in joint function.

2. *Use to "modify the course of the disease."* Although corticotropin and cortisone do not have a truly curative effect, it can be stated rather unequivocally that administration of sufficient amounts to patients with rheumatoid arthritis or with bronchial asthma will result in complete disappearance of all signs and symptoms of the disease in almost all cases, and that if dosage is maintained at a sufficient level the remission will be maintained indefinitely.

In the experience of the authors here being reported upon, the latter has been the guiding philosophy from the beginning, under the working hypothesis that complete suppression of the disease might permit gradual mobilization of specific immunizing processes that would eventually eliminate the causative factors of the disease.

On the basis of three years' observation, the authors believe that hormonal therapy of this type is much to be preferred over the "super-aspirin" approach for the following reasons:

1. In a comparison of statistics with those of several rheumatologists who have used minimal and/or intermittent hormonal therapy, it was noted that a much higher percentage of patients treated for complete suppression have been returned to full activity.

2. The total hormonal dosage required for complete suppression over a period of more than two years is no greater than, and frequently less than, that required when the hormones are used as "super-aspirin."

3. The incidence of untoward effects is no higher if suitable precautions are taken.

4. It seems probable that a significant number of patients will eventually be able to discontinue therapy entirely. This statement is based upon the rate at which dosage has been decreased in patients currently under study.

The foregoing statements apply equally to severe non-seasonal asthma and rheumatoid arthritis. In

the case of seasonal asthma, referable to specific pollens, hormonal therapy should be used only for patients who are unresponsive to desensitization procedures, and even then hormonal therapy should be carried out only during the pollinating season.

For all patients receiving hormonal therapy there should be frequent determination of the number of circulating eosinophils, and in addition patients with rheumatoid arthritis should have regular determination of the erythrocyte sedimentation rate. The authors try to keep the number of eosinophils under 100 per cu. mm. and to keep the sedimentation rate within normal limits at all times.

Modification of the Course of Diseases with High Mortality Rates

The present series includes a considerable group of patients in whom an almost certainly fatal outcome appears to have been postponed indefinitely. Among them are two laboratory technicians who work in the same clinic as do the authors. One of them had been ill with pemphigus for a period of approximately a year and was regarded by all attending physicians as near death. At one time it was necessary to give several hundred milligrams of corticotropin and cortisone daily to suppress the manifestations of the disease and to bring the number of eosinophils down from as high as 16,000 per cu. mm. of blood to zero. Therapy was recently discontinued, approximately two years after it was started. There had been no signs or symptoms of the disease for a period of 14 months. The other had rapidly progressive dermatomyositis. After four months of hormonal therapy, she was able to return to full activity. At the end of almost three years of treatment, she still requires minute dosage of corticotropin (0.5 to 1.5 USP units daily).

Use of Corticotropin and Cortisone in Severe Infections

It has been well demonstrated that the administration of corticotropin and cortisone to patients with specific infectious processes will result in partial or complete disappearance of all symptoms and most of the clinical signs of the infection, but that no inhibition of growth of the causative organism will result.^{3, 4} For present purposes this can be described as a nonspecific antitoxic effect, referable to protection of body cells from the toxins produced by a wide variety of pathogens. The precise mechanism is still unknown.

Over the past 18 months a series of patients under the authors' observation with diverse infections have received corticotropin/cortisone therapy in conjunction with intensive antibiotic therapy.^{1, 2} Only patients who had not had adequate response to antibiotic therapy alone were selected for evaluation.

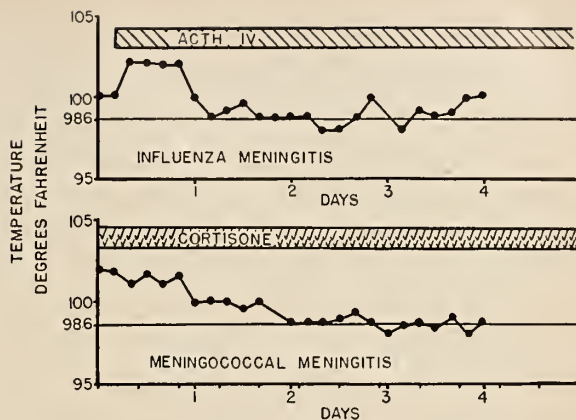


Chart 1.—Effect of corticotropin and cortisone upon pyrogenicity (and toxicity) of diseases widely different etiologically. Both patients became symptom-free during corticotropin administration.

From observation of those patients the following statements are permissible:

1. The administration of corticotropin and cortisone to patients with severe acute infectious diseases, unresponsive to antibiotics alone, results in striking clinical improvement in a high proportion of cases. (The effect upon the temperature of two patients with widely different clinical conditions is shown in Chart 1.)
2. In the majority of patients in whom there was favorable initial response, recovery ensued.
3. It is mandatory that all patients with infectious diseases, receiving corticotropin and cortisone, shall also receive intensive antibiotic therapy before, during and after the hormonal therapy.
4. The use of suitable adjuvant measures is imperative in all such patients (see below).
5. The presence of tuberculosis should be considered a contraindication for hormonal therapy, unless the patient's condition is considered to be hopeless without such therapy.

Modification and/or Prevention of "Untoward Effects" of Corticotropin and Cortisone

Cushing's syndrome by definition is a disease referable to excessive production of cortisone or cortisone-like hormones. Hence it is obvious that intensive administration of corticotropin and/or cortisone can produce all the manifestations of this disease.

In addition, on the basis of animal experimentation, there is considerable evidence to suggest that corticotropin/cortisone administration, by suppressing the inflammatory reaction, and perhaps through other mechanisms as well, may predispose to dissemination of certain infectious agents.

As in the case of a number of other potent therapeutic agents, therefore, a question that is faced is

whether favorable effects can be augmented, and untoward effects minimized.⁵ To obtain an answer to this question, it is well to consider some of the outstanding physiologic and pharmacologic effects produced by cortisone-like steroids: (1) Increased protein tissue breakdown; (2) excessive retention of sodium and depletion of potassium; (3) depletion of other constituents of bone and soft tissue; (4) "diabetogenesis."

In light of those effects, a dietary program designed to prevent untoward effects of corticotropin/cortisone would include the following:

1. High protein intake (120 to 200 or more grams daily).
2. Low sodium intake (200 to 1,000 mg. of sodium chloride daily).
3. High potassium intake (10 to 40 gm. of potassium chloride daily).
4. Low carbohydrate intake (less than 130 gm. daily).
5. Adequate calories and vitamins. It is obvious that for persons requiring average or more than average caloric intake, a significant portion of the calories must be derived from fat.
6. The use of testosterone and estrogen to decrease the corticotropin/cortisone-induced breakdown of soft tissue and bone.

In the experience of the authors, the use of the foregoing measures significantly diminishes the undesirable effects of corticotropin and cortisone; and hence, at least in a relative sense, increases the therapeutic efficiency of those hormones.

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Organic Phosphorus Poisoning in General Practice

Parathion, TEPP, HEPT, EPN and Others

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BECAUSE OF THE ABRUPT ONSET of serious illness several hours after exposure, the great majority of cases of poisoning by insecticides that contain organic phosphorus are treated by general practitioners in the vicinity of the patient's home. Therefore it is of life-saving importance that all physicians be alert to recognize the condition and institute prompt treatment. The subject is not yet covered in medical textbooks.

Not used commercially before 1948, pesticides containing organic phosphorus—Parathion, TEPP, HEPT, EPN, OMPA and others—are now used extensively in commercial agriculture. They are used on nearly all tree crops, on the majority of field crops and to some extent on forage crops from the time of budding or sprouting to shortly before harvest and are applied as spray or dust from both ground and aircraft equipment. Chemicals in this group are unlike any others in common use in that they are cholinesterase inhibitors. The symptoms they cause (and the treatment) are peculiar to them. In all these compounds it is the organic phosphorus containing part of the molecule that is cholinesterase inhibiting. Parathion is diethyl p-nitrophenyl thiophosphate. TEPP is tetraethyl pyrophosphate. HEPT is hexaethyl tetraphosphate. EPN is ethyl p-nitrophenyl thionobenzene phosphonate. OMPA is octamethyl pyrophosphoramidate, which has been used in the treatment of myasthenia gravis.² Several other similar compounds are being used experimentally and will probably soon be in general use. On injection into laboratory animals there are pronounced differences in toxicity of these various compounds, but in practical use all present about the same hazard. Since pharmacologic factors, symptoms and treatment are the same for all members of the group, they will be discussed simply as organic phosphates. This term, although commonly used, is technically incorrect, for some are not phosphates.

While the organic phosphates in pure form are liquids, they are packaged and sold in powder concentrate form of usually 15 per cent or 25 per cent strength. The concentrate usually is mixed in the field with either dust or liquid diluent and the mixture applied to crops in strengths not exceeding 2 per cent. Even the dilute mixtures entail hazards

• *Inhalation, skin absorption or ingestion of insecticides containing organic phosphorus may result in abrupt onset of serious illness several hours following exposure. Because of the acute onset, often at night, the patients usually are observed by the first available physician rather than by an industrial physician. Prompt recognition and adequate treatment are essential to prevent death.*

The organic phosphorus radical has the specific effect of inactivating cholinesterase in the body. When cholinesterase is reduced below a critical level continuous stimulation of the entire parasympathetic nervous system results. The major symptoms are diarrhea, vomiting, pulmonary edema, respiratory difficulty and tonic convulsions. Myosis is frequently present and when found is almost pathognomonic, especially if associated with other symptoms.

Treatment consists essentially of heroic doses of atropine or a similar parasympathetic inhibitor, plus supportive therapy.

Patients who do not die recover rapidly and completely, but they should not risk re-exposure until cholinesterase activity in the blood reaches a static level which may take as long as ten weeks.

unless proper precautions are taken. The organic phosphates hydrolyze and eventually become non-toxic, whether slowly or rapidly depending on a number of factors. In unusual circumstances, cases of poisoning are known to have resulted from working in fields 34 days after spraying.

INCIDENCE OF POISONING

At present organic phosphorus poisoning is virtually limited to persons who have absorbed insecticide materials, since the cholinesterase inhibiting chemicals are used commercially for no other purpose. The incidence varies with the season. Among agricultural workers it is low during the winter months and reaches a peak at the height of the spraying season. Among formulators, packagers and distributors the peak is two or three months earlier. As

many as 30 cases have been reported in California in one month as occupational diseases. Several deaths have occurred. In addition to fatal cases following occupational exposure death has followed use of one of the agents for a pediculicide, ingestion with suicidal intent, and being sprayed by a playmate using a hand sprayer as a "ray gun."

Poisoning is by no means limited to handlers of organic phosphate materials. Among those in whom it may be suspected are all agricultural workers (including greenhouse and nursery workers) who have occasion to enter treated areas after application, children playing in treated areas, bee keepers, casual trespassers, occupants of houses in or adjacent to treated areas, travelers walking past fields during application, mechanics working on contaminated equipment and many others.

PHARMACOLOGY AND TOXICOLOGY

The pharmacologic and toxicologic properties of the organic phosphates are not completely understood, but enough is known to account for most of the symptoms and to rationalize the treatment. The materials are readily absorbed through the intact skin, by inhalation and by ingestion. They are apparently rapidly broken down by the body and one of the breakdown products is paranitrophenol, which is excreted in the urine.

Very small amounts appear to inhibit cholinesterase activity only temporarily, but larger amounts either destroy cholinesterase or make it permanently inactive. There is evidently a quantitative relationship between the amount of toxic material absorbed and the amount of cholinesterase destroyed (or inactivated). The destructive effect begins almost immediately and is completed within a few hours. Except for loss of cholinesterase activity in the blood and tissues no organic changes have been observed at autopsy in fatal cases other than the congestion usually noted following death in convulsive states. There is no evidence that the small amounts which can be chronically tolerated by man (that is, amounts that do not reduce cholinesterase to symptom-producing levels) cause any symptoms or organic changes. Nor is there evidence either that tolerance can be acquired or that susceptibility increases following repeated exposure. However, it should be emphasized that small exposures repeated before the lost cholinesterase is regenerated will, in time, reduce the activity level to the point at which acute symptoms develop. These materials are not skin irritants nor are they known to be sensitizing agents to any noticeable extent.

Since the function of cholinesterase is to hydrolyze acetylcholine, destruction of the esterase activity in the body allows accumulation of acetylcholine,

which is produced by and associated with stimulation of certain nerves, particularly the postganglionic fibres of the parasympathetic system. The accumulation of acetylcholine results in continuous stimulation of the entire parasympathetic system (muscarine effect). There is also an effect on other portions of the nervous system similar to that of nicotine.

The cholinesterase activity level of erythrocytes and plasma in any person remains quite constant except as lowered by the organic phosphates and severe blood dyscrasias. However, as the activity levels vary considerably between persons, one person may have symptoms of poisoning even though he has cholinesterase activity higher than the normal for another. It is evident that there is normally considerably more cholinesterase present in the body than is needed to destroy the acetylcholine formed. There appears to be a rather thin dividing line between the amount of cholinesterase needed to maintain physiologic function and the amount present when symptoms appear: Repeated small exposures cause no symptoms whatever, then with one additional small exposure severe symptoms develop. This critical level as measured by erythrocyte activity is considered to be below 50 per cent of the normal level for the individual. The plasma cholinesterase activity level falls more rapidly than that of erythrocytes and also returns to normal more rapidly after exposure. It is probable that the erythrocyte activity gives the more accurate estimate of tissue cholinesterase. Cholinesterase, as indicated by erythrocyte levels, is regenerated slowly and may take as much as ten weeks or more to return to normal after severe poisoning.

ONSET AND SYMPTOMS

Since the organic phosphates are rapidly absorbed, act quickly upon cholinesterase and promptly disappear, the onset of symptoms follows within a few hours of the last exposure and is not known to have occurred more than 24 hours following exposure. (It should be remembered, however, that exposure may occur after the end of the work period, particularly from handling contaminated clothing.) Symptoms are known to have appeared within fifteen minutes of an exposure consisting of one strong whiff of concentrated material. Death has followed within two hours after application of a solution as a pediculicide. Onset of symptoms most commonly occurs during or shortly after exposure or during the night when exposure has been in the afternoon.

The symptoms are those of hyperstimulation of the parasympathetic nervous system. In addition there may be, in some cases, symptoms like those of the excitement stage of nicotine poisoning. Pre-

monitory symptoms of headache, sweating and possibly salivation or lacrimation may precede for about an hour the abrupt onset of any or all of the following symptoms: dim vision, dizziness, nausea, vomiting, diarrhea, incontinence, difficulty in breathing, fainting, muscular twitching, tonic convulsions, respiratory failure or total collapse. Fixed myosis, asthmatic rales or pulmonary edema may also be present. The body temperature may be normal or vary slightly in either direction. Contrary to theoretical expectations, the patients usually appear to be in mild shock with rapid pulse and low blood pressure. There is no inflammatory process. With the exception of low cholinesterase activity, blood and urine are normal, consistent with the degree of dehydration present.

In light of the toxicologic and pharmacologic phenomena involved, it does not seem possible that there could be chronic symptoms owing to the organic phosphates or that onset of symptoms could be delayed beyond the few hours following exposure during which cholinesterase is destroyed. Continued complaints following exposure to organic phosphates are not uncommon, but they are not apparently of organic origin.

DIAGNOSIS

History of exposure within 24 hours and fixed, contracted pupils coupled with any of the other symptoms in a previously well subject are almost pathognomonic of organic phosphate poisoning. However, contraction of the pupils does not invariably occur, and it may result from the local effect of minute amounts of material in the eye with no other systemic reaction. Headache, only, if it occurs during or shortly after exposure, should be regarded with suspicion and watched carefully. The presence of several of the symptoms after exposure is usually sufficient to justify treatment. Persons with organic phosphate poisoning have astonishingly high tolerance for atropine. If large doses do not diminish the symptoms or are not tolerated, some other condition should be suspected. The reverse serves to confirm the diagnosis. The presence of any of the symptoms among several of a group with recent similar exposure is highly suspicious; in fact, the whole group should be brought under observation if possible. Group poisoning by organic phosphates can usually be differentiated from group food poisoning or poisoning from other chemicals by the presence of contracted pupils among some of the patients. In single cases in which a history of exposure cannot be evoked, organic phosphate poisoning may be easily confused with food poisoning or poisoning by chemicals that produce pulmonary edema. The condition must also be differentiated from asthma, mushroom poisoning, acute infectious disease, emo-

tional reactions with hyperadrenalism, cerebrovascular disease and cardiac failure. Owing to the time factor, laboratory procedures are useless for establishing a diagnosis before beginning treatment. A low level of cholinesterase activity in the blood, even if not determined until several days after the acute episode, is useful in confirming a diagnosis. The blood does not lose cholinesterase activity to any great extent for several hours after death. Therefore, the taking of blood samples postmortem is useful in unexplained sudden death. Traces of the organic phosphates may be observed in examination of tissue taken soon after death from the liver, brain or other organ. Paranitrophenol may be recovered from the urine for a few hours after exposure, but the procedure is not known to have clinical value.

TREATMENT

Treatment of organic phosphate poisoning is largely symptomatic, but it must be prompt and adequate if life is to be saved. Atropine, by paralyzing the parasympathetic nerve endings, is the physiological antidote for the muscarine effect. It should be given by injection promptly and in large doses. The tolerance for atropine is greatly increased in this condition and doses of 1 mg. (1/60 grain) to 2 mg. (1/30 grain) should be given every hour until symptoms are relieved or signs of atropinization appear. Thereafter, smaller doses should be given to control symptoms. Close observation should be continued for 24 hours after the disappearance of symptoms and after the last dose of atropine. This is frequently the only treatment necessary. If the material has been ingested, vomiting should be induced promptly if it does not occur spontaneously, or the stomach washed. Oxygen therapy should be instituted at the first sign of pulmonary edema or respiratory difficulty. Tracheal catheterization may become necessary to remove excess secretion. Postural drainage is useful, especially as a first-aid procedure. If respiratory failure occurs, prolonged artificial respiration is indicated. Animals have completely recovered after several hours of artificial respiration.

Symptoms usually disappear rapidly and completely when treatment is given. There is no need for rest in bed or dietary restriction after disappearance of symptoms. The patient should be reassured that no permanent damage has been done and that he can do ordinary work without further convalescence. He should be forbidden to risk even slight exposure to organic phosphates until the blood cell cholinesterase activity becomes constant (presumably at the level that is normal for the patient). To bolster the warning the patient must be made to understand why further exposure is dangerous even though he may feel perfectly well.

If at all possible, patients with organic phosphate poisoning should be hospitalized, regardless of how mild the case may at first appear to be, in order to maintain close observation and that oxygen therapy may be available on short notice. If a patient must be treated at home or in an office, both the patient and someone able to supply immediate transportation should be advised of the danger and told to take the patient immediately to adequate medical care at the first sign of return or increase of any symptoms.

Use of morphine is contraindicated because of the effect on the respiratory system. Other sedative or hypnotic drugs should be used carefully and only when essential. BAL (British anti-Lewisite), sodium thiosulphate, calcium gluconate and other drugs often used in some types of chemical poisoning are not indicated in this condition and they may be damaging.

As the organic phosphates are not irritants and are not active skin sensitizing agents, if dermatoses should develop following exposure to pesticides containing organic phosphates they should be treated as separate entities caused perhaps by other materials in the mixture.

LABORATORY PROCEDURES

The determination of the cholinesterase activity levels both in the erythrocytes and in the plasma is of great value in connection with organic phosphate poisoning, but its chief use is as a preventive measure. It is also used for confirmation of diagnosis and for determining when cholinesterase regeneration is complete after poisoning. There are three techniques for this determination in common use. The results are comparable for clinical use but the reports are in different units, necessitating conversion before comparison.

The method in most common use is that described by Michel.¹ Results are reported in electrometric units.

The method described by Stedman and co-workers gives results in terms of how many cubic centimeters of fiftieth normal sodium hydroxide solution it takes per cubic centimeter of sample to neutralize the acetic acid produced by the reaction between cholinesterase and acetylcholine.

A third method utilizes the Warburg apparatus, and the results are reported in terms of carbon dioxide liberated on neutralization of the acetic acid produced by the reaction.

A 10 cc. specimen of venous blood is enough for analysis by any of the techniques if prepared as follows: Use dry needle, syringe and tubes. Place the blood in a citrated tube and shake thoroughly. Centrifuge as soon as possible and put the plasma in a

clean tube. Wash and centrifuge the erythrocytes three or four times with normal saline solution and leave suspended in about 10 cc. of saline solution. To avoid possible confusion, it is well to put a label reading "not accurately diluted" on the tube containing the erythrocytes. This will warn the laboratory to centrifuge the cells and dilute in accordance with the technique to be used. The samples should be refrigerated before and during shipment for best results. Capillary blood may be used to advantage under certain conditions, but a specimen of that kind ought not be depended upon unless previous arrangement has been made with the laboratory.

Since the activity levels for both erythrocytes and plasma vary widely between persons, it is unrealistic to designate a so-called "normal" level. The range of normal levels is so broad that symptoms may occur in some persons at a level higher than the normal for others. Nevertheless, for the sake of convenience, several workers report results as per cent of *average*. Their figures are often miscalled "per cent of normal." Thus, reports of over 200 per cent are not uncommon and symptoms of poisoning may occur in some persons with cholinesterase activity at around 100 per cent. The *average* normal activity level for erythrocytes has been found to be, by the Michel technique, roughly that which is required to reduce pH by 0.75 in one hour. Activity at that level, stated in results by the Stedman method, would be 2.8 cc. of fiftieth normal sodium hydroxide solution.

In subjects that have not been exposed to cholinesterase inhibitors the plasma and erythrocyte levels are approximately equal, but after exposure the plasma level falls more rapidly than that of the cells. On the other hand, the plasma level rises much more rapidly than that of the cells after termination of exposure. This phenomenon is graphically illustrated in a recent article describing the use of OMPA in the treatment of myasthenia gravis.² The cholinesterase activity of the erythrocytes probably most closely parallels that of the body tissues. Determination of the level in either cells or plasma may be used as an aid in diagnosis of organic phosphorus poisoning provided the difference in levels between the two in unusual circumstances is kept in mind.

It is extremely unlikely of course that the normal cholinesterase level for a person in whom organic phosphate poisoning is suspected will be known. There is, however, a working rule that is helpful: It is known that symptoms rarely occur until the cholinesterase level falls at least 50 per cent below the normal level, and since the normal of nearly all persons is above 50 per cent of *average*, it follows that a report of plasma cholinesterase below 25 per cent of average is very strongly suggestive of clinical poisoning without reference to the individual

normal. Reports between 25 per cent and 80 per cent of average are suspicious and justify further follow-up.

A progressive rise in either erythrocyte or plasma cholinesterase activity indicates that excessive exposure to organic phosphates has occurred and that regeneration is taking place. The plasma cholinesterase may reach a stationary level about three weeks after clinical poisoning; erythrocyte activity may take as much as ten weeks to become stationary (presumably at the pre-exposure level), the time depending somewhat on the severity of the exposure.

Perhaps the greatest use for this laboratory procedure is in the prevention of illness or death from exposure to the organic phosphates. Since the fall in cholinesterase activity occurs promptly after absorption of the organic phosphates, periodic determinations of the cholinesterase value in the blood of persons frequently exposed to these materials could be used to show whether or not the rate of destruction of cholinesterase was exceeding the rate of regeneration. If the tests indicated approaching danger, the subject could improve protective measures or, at an appropriate time, could be removed from the risk of exposure until cholinesterase activity increased to approximately pre-exposure level.

Some industrial physicians responsible for groups of exposed workers have adopted a policy of recommending temporary removal from exposure of workers whose erythrocyte cholinesterase activity falls below 50 per cent of the average level. This is admittedly a compromise owing to the difficulty of determining the normal level for each person before exposure. It may fail to protect those with an unusually high normal level and it may work an economic hardship on those whose normal level is below average, but it does protect the vast majority of workers. The period between determinations should be set by the physician, taking into consideration the type and degree of exposure and other factors.

PREVENTION

Organic phosphate poisoning will not occur if the individual avoids all skin contact, inhalation and ingestion of the material. Proper engineering and

process controls eliminate a great many of the hazards of absorption. In instances where exposure cannot be avoided, adequate personal protection may be secured by wearing a clean, completely waterproof and vaporproof suit covering the entire body including feet, hands and head, wearing a full face-piece gas mask with effective organic vapor canister, thorough cleaning of contaminated equipment, disposal of contaminated waste, and thorough bathing immediately after removal of protective clothing. In actual practice, seldom is a person both able and willing to carry out all these precautions completely. Moreover, he could not live for long in completely impermeable clothing. Therefore, compromises must be resorted to, but they should be as near to the ideal as practicable in the circumstances.

Education of both the general public and the users of these materials to the very real hazards involved in even casual and indirect contact with them is of great value. The home or home garden use of these materials should be actively discouraged.

The prescription of atropine to be given as a first-aid measure has been advocated. While this may be justified in certain circumstances, a physician should be very cautious in prescribing this dangerous drug for use in unskilled hands. Moreover, if atropine is given before the patient is examined it may confuse the diagnosis and delay treatment.

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NOTE: OMPA is, to some extent, a systemic insecticide—that is, the plant absorbs the material and thus itself becomes toxic to the insect. It is probable that other systemic organic phosphate materials will soon be registered for sale in California. Some of them are not cholinesterase inhibitors *in vitro* but are converted to such within the human body with the result that the toxicologic action is essentially the same as that of the organic phosphate materials now used.

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Chest Injuries Among Korean Casualties

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Most battle injuries of the chest are minor wounds or penetrating wounds, the only sequelae of which are minimal hemothorax or pulmonary trauma. Men so wounded usually recover in field or base hospitals. Major injuries usually involve major circulatory vessels and usually cause death immediately or before definitive surgical treatment can be obtained.

This report concerns the 35 patients with major thoracic battle injuries who were treated at the U. S. Naval Hospital in Oakland during the first five months of the Korean war. Six had non-penetrating shrapnel wounds involving the chest and other areas. In six of the other 29 cases the penetrating wounds were not demonstrable and required no treatment. Table 1 shows the extent of injury in these 29 patients. Table 2 indicates the therapy used in the 23 cases requiring further treatment and lists results and deaths.

FIELD TREATMENT

One important measure in the care of wounded in Korea which was not practiced to such a degree in World War II is the rapid evacuation of battle-field casualties via helicopter to field hospitals and hospital ships, and the secondary air evacuation of patients from field hospitals to base hospitals and to hospitals in the United States. This has made possible the saving of many lives that otherwise would have been lost by the delay and trauma of jeep and field ambulance evacuation.

The principles of the care of chest injuries are largely those formulated and practiced during World War II. The immediate care on the battlefield and in the field hospital, in general, consists of:

1. Blood replacement and oxygen therapy.
2. Closure of sucking wounds of the chest.
3. Diagnostic needle aspiration in cases where diagnosis of pneumothorax or hemothorax is uncertain.
4. Early and repeated aspiration of hemothorax.
5. Insertion of intercostal tubes in cases of tension pneumothorax and massive hemothorax (Figure 1).

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The opinions expressed are those of the authors, and do not necessarily reflect the views of the Medical Department of the Navy or of the Navy Department.

• Major wounds of the chest usually cause immediate or early death. Of 35 patients with major thoracic battle injuries who were treated in one naval hospital, six had non-penetrating wounds of the chest and other areas. Of the 29 with penetrating wounds of the chest, 23 were treated by aspiration of hemothorax, decortication in three cases, and thoracotomy for control of hemorrhage in one case and for removal of a foreign body in another.

Four cases are reported, two to illustrate the usual course of treatment and two in which the patient died.

6. Tracheotomy in cases with pulmonary hemorrhage or with multiple rib fractures which impair the stability of the chest wall.
7. Frequent tracheal aspiration by means of catheter during the early post-injury period.
8. Intercostal or paravertebral nerve block with procaine to prevent the development of primary edema and to control pain.

The extreme hardships under which medical units had to work during combat must be considered, as also the fact that many of the medical officers caring

TABLE 1.—Residual Effects in 29 Cases of Penetrating Wound of the Chest

	Cases
Hemothorax	17
Pneumohemothorax	7
Pneumonitis	1
Abdominal involvement	3
Cardiac injury	1

Note: Hemothorax and/or pneumohemothorax was present in the thoracoabdominal injuries and in the cardiac injury.

TABLE 2.—Results of Therapy in 23 Cases of Penetrating Wound of the Chest

Treatment	Number Treated	Results		Death
		Satisfactory	Unsatisfactory	
Aspiration of hemothorax.....	17	15	2	..
Thoracotomy with lobectomy and decortication	1	1	..	..
Thoracotomy with decortication.....	2	1	..	1
Thoracotomy with attempted removal of foreign body in heart	1	..	..	1
Thoracotomy to control hemorrhage of chest wall.....	1	1	..	..
Exploratory thoracotomy	1	1	..	..

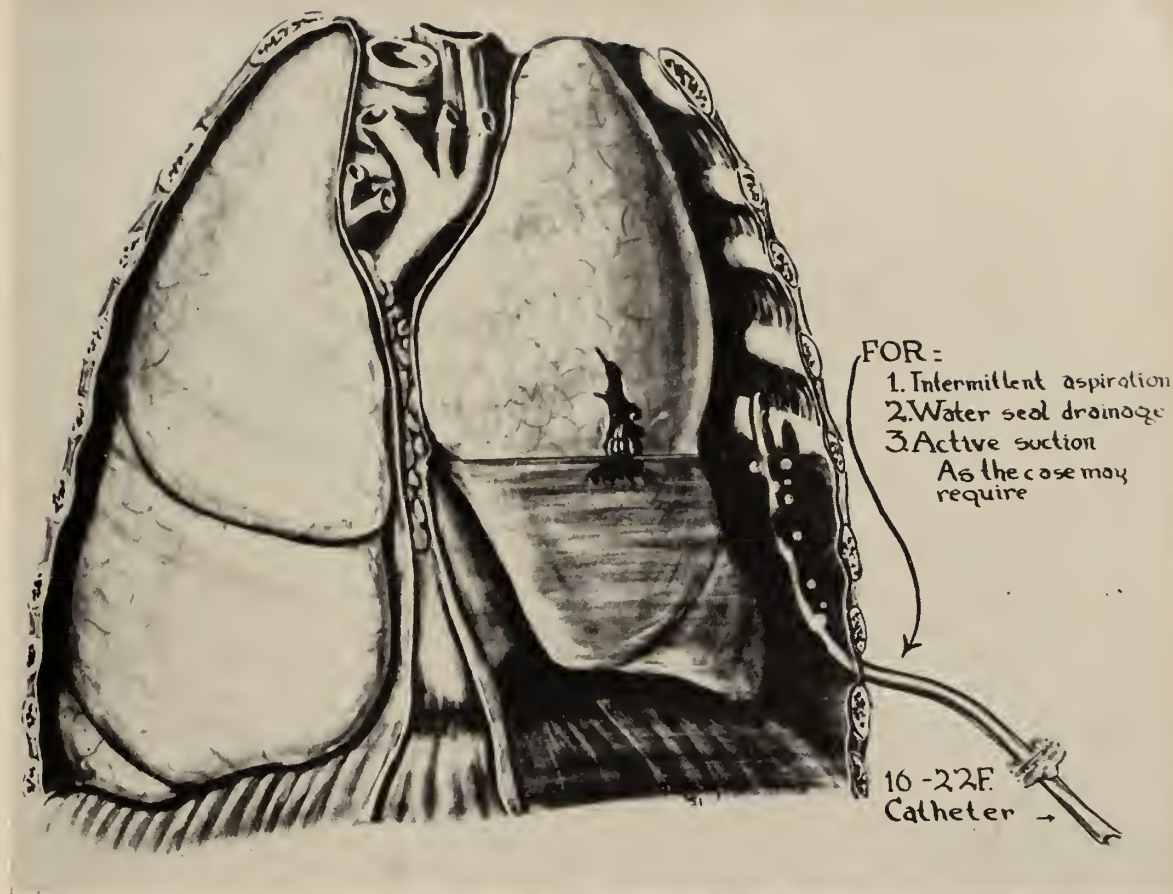


Figure 1.—Intercostal drainage of the chest with a catheter.

for these patients were without training or experience in surgery of the kind required.

Definitive surgical treatment of chest injuries at the U. S. Naval Hospital in Oakland is based on several flexible general principles. Foreign bodies in the thorax are left *in situ* unless they are large or lie near large vascular structures. Foreign bodies in the heart are removed if possible.

Hemothorax is treated by repeated frequent aspiration as long as fluid is obtained. Response to this procedure is usually satisfactory, as was found by Sampson and Burford.¹ Decortication is done only if organized hemothorax occupies half or more of the pleural space. Of 15 patients with hemothorax only three required decortication. Biological debriding agents were not available in sufficient quantity during this period to be used extensively.

Empyema is almost always treated by further procedures than closed or open drainage. Open thoracotomy has been used with decortication if necessary and immediate reexpansion.

There were two deaths in this series of 35 cases, the first resulting from a bullet wound of the heart

which produced an arteriovenous fistula and aortic regurgitation. The second death resulted from a thoracoabdominal injury, the cause of death being generalized peritonitis.

The following case reports illustrate the principles of therapy followed.

CASE 1: A Marine received a penetrating bullet wound in the left side of the chest which caused hemopneumothorax and complete collapse of the lung. During a ten-day period the chest was aspirated frequently. Reexpansion of the lung was rapid and without complication. Six weeks after the injury the patient was asymptomatic, and x-rays of the chest showed only minimal pleural thickening at the left base.

Comment: This case represents the usual course of uncomplicated, unorganized hemothorax treated by repeated aspiration.

CASE 2: A Marine received a gunshot wound in the right side of the chest in combat one month prior to admission to the hospital. He had been treated by aspiration over a ten-day period following the injury; however, the right pleural space remained almost completely obliterated by organized hemothorax. X-rays of the chest upon arrival at this hospital revealed approximately 75 per cent collapse of the right lung, with no evidence of mediastinal shift. Only a small amount of serosanguineous fluid was obtained by repeated aspiration. On the tenth hospital day thoracotomy

was performed with decortication of both parietal and visceral surfaces of the right pleural space (Figure 2). Operative findings were those of organized hemothorax. The postoperative course was uneventful. Postoperative x-rays revealed complete expansion of the right lung.

Comment: This case represents the criteria which were used in selecting patients for decortication. Repeated needle aspiration had not resulted in reexpansion of the lung because of the organization of fibrin within the hemothorax. The organized hemothorax occupied a space in excess of 50 per cent of the pleural space.

CASE 3: A Marine received a penetrating bullet wound of the posterior chest wall at the level of the seventh rib. Thoracentesis was done immediately and bile-stained, serosanguineous fluid was obtained. A laparotomy was performed at the field hospital, the findings from which are unknown. A Penrose drain was placed beneath the right diaphragm at that time. On admission to the U. S. Naval Hospital in Oakland a month later the patient was acutely ill and had an empyema of the right pleural space. Two weeks after admission a right thoracotomy was performed, and empyema communicating with a subdiaphragmatic abscess was found. Considerable destruction of the superior surface of the liver was noted. Decortication was performed, the defect in the diaphragm closed, and the chest drained by the closed method.

The patient remained acutely ill, with symptoms of serious infection. Increasing signs of peritonitis and mechanical intestinal obstruction appeared. On laparotomy on the fifteenth postoperative day, generalized peritonitis was observed, with mechanical obstruction of a loop of small bowel which had become adherent within the pelvis. The patient died six hours after operation.

Comment: This case represents the serious problems encountered in thoracoabdominal wounds, and is typical of those cases of chest injury in which the greatest mortality occurs. The failure to realize the thoracoabdominal nature of the injury and the resultant failure to drain the pleural space and to close the injured diaphragm were predisposing factors in the patient's death.

CASE 4: A 20-year-old Marine was admitted to the U. S. Naval Hospital in Oakland two weeks after receiving a penetrating bullet wound of the right side of the chest, the wound of entrance being just below the right nipple. On examination at the time of injury minimal hemothorax had been observed. During the ensuing two weeks progressive symptoms of congestive myocardial failure developed. Pulmonary edema, liver enlargement, ascites, increase in venous pressure, cardiac enlargement and dependent edema were observed on admission.



Figure 2.—Pleural plaque removed by decortication in Case 2.

X-rays of the chest showed a bullet lying within the base of the cardiac shadow. A clinical diagnosis of arteriovenous fistula at the base of the heart, with the possibility of cardiac tamponade, was made. The patient was treated by digitalization, diuretics, bed-rest and salt-free diet. During the period of therapy increasing cardiac failure was evident.

On the tenth hospital day thoracotomy was performed in an attempt to correct the arteriovenous fistula which was thought to be present, and to remove the foreign body if practicable. The foreign body was found to be lodged within the wall of the aorta and left auricle. The patient's condition became precarious and his chest was quickly closed. He weakened rapidly and died six hours after operation. On postmortem examination the bullet was found to have traversed the right auricle, and the aorta and entered the left auricle. An arteriovenous fistula existed between the right auricle and the aorta. In addition, a perforation of the right anterior aortic valve cusp had caused serious aortic regurgitation.

Comment: It is believed that no surgical correction for the injury was possible, and it is considered remarkable that the patient survived as long as he did.

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Endoscopy in Hernia at the Esophageal Hiatus

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HERNIATION of a portion of the stomach through the esophageal hiatus of the diaphragm is a well recognized although poorly understood clinical entity. True congenital shortening of the esophagus with thoracic stomach is rare; it would be expected that symptoms of hiatal hernia would in that condition be evident from early infancy. Most cases of herniation through the esophageal hiatus are acquired.

It is erroneous to assume that hernia of the esophageal hiatus occurs only with relaxation of the hiatus as in older persons. The authors' experience with endoscopy indicates that in a significant number of cases herniation occurs through a normal or even a narrowed hiatal ring. The condition is usually attributed to increased intra-abdominal pressure, especially in obese persons in whom stooping, bending, coughing or other stresses exert sufficient pressure to force the stomach through the hiatal ring, or to shortening of the esophagus by inflammation or carcinoma. The authors believe that the condition is of functional origin in some cases. In some patients, usually young, nervous, anxious and tense, there is a striking association of symptoms of hiatal hernia with previous psychic trauma. It is the authors' hypothesis that the herniation in these persons is produced as a result of esophageal spasm and shortening which causes a portion of the gastric cardia to be drawn through the esophageal hiatus. Another functional cause is reflex spasm and shortening of the esophagus, frequently associated with other abdominal disorders, particularly chronic cholecystitis and peptic ulcer. The functional origin of hernia of the esophageal hiatus has not been adequately stressed.

The value of endoscopy in the diagnosis of hiatal hernia and particularly of associated conditions within the hernial pouch has been emphasized by several observers. Moersch¹ and Clerf² recommended esophagoscopy as a method of confirming roentgenographic diagnosis and stressed the value of it in the diagnosis of associated conditions such as gastritis, erosion, hemorrhage and ulceration. Benedict³ and Belsey,⁴ advised the use of esophagoscopy in cases in which the roentgenographic findings are equivocal or negative. On the whole, the use of gastroscopy in hiatal hernia has not met with general acceptance. However, Schindler⁵ and Palmer⁶ stated that gas-

• Endoscopy is useful for confirming diagnosis of hiatal hernia as made by x-ray examination, for establishing the diagnosis when x-ray examinations do not disclose the herniation, and for observation of resultant abnormalities in the affected area. The authors' experience with gastroscopy and esophagoscopy in hiatal hernia is reported and the techniques and usual findings in these procedures are summarized.

troscopy may be useful to confirm diagnosis made from x-ray films and to disclose mucosal abnormality within the hernial pouch. Schindler⁵ added that gastroscopy may be the method by which hiatal hernia is first diagnosed, implying that subsequent x-ray examination usually confirms the diagnosis. The present report gives the authors' experience with the use of both esophagoscopy and gastroscopy in patients on whom x-ray examinations were also made.

Of twelve cases of esophageal hiatal hernia in which the x-ray findings were unequivocally positive, esophagoscopy was done in nine cases and the diagnosis was confirmed by this procedure in seven cases. Gastroscopy was done in seven cases and confirmation obtained in five. It is very likely that in the cases in which these methods did not disclose the hernia it was reducible, and it is possible that the hernia may have been reduced through the instrumentation. It is of interest that associated abnormality was found equally well by either method; esophagitis, hemorrhagic gastritis of the pouch, and superficial gastritis of the pouch were observed in one case each by esophagoscopy; atrophic gastritis of the pouch and hypertrophic gastritis of the pouch were observed in two cases each by gastroscopy. Gastroscopy may disclose abnormality which is entirely confined to the hernial pouch and has no effect on the remaining portion of the stomach. In one of the cases in this group it was thought that esophagitis preceded and then caused herniation.

In three cases the x-ray findings were equivocal and esophagoscopy examination disclosed no abnormality, although on gastroscopy one patient was found to have a small hiatal hernia. In this instance the area of herniation was out of reach of the esophagoscope. Hypertrophic hemorrhagic gastritis confined entirely to the pouch was found in this patient by gastroscopy.

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The most striking experience the authors have had with hiatal hernia was in eleven patients who had clinical symptoms suggesting hiatal hernia and who were examined roentgenographically with negative results. Two of the cases were diagnosed by esophagoscopy and the remaining nine by gastroscopy. In all cases the herniation was small. In one case atrophic gastritis entirely confined to the pouch was disclosed by gastroscopy. No other abnormality was observed by either procedure. In one case the diagnosis was confirmed at operation.

DISCUSSION

There is no doubt about the value of esophagoscopy and gastroscopy in the diagnosis of abnormality associated with hiatal hernia, particularly when there is hemorrhage or when x-ray examination discloses a secondary defect within the esophagus or within the herniated portion of the stomach.

The authors conclude from their experience that endoscopy is indicated in any case in which the symptoms are significant of hiatal hernia and diagnosis cannot be established by x-ray examination. If x-ray examination discloses no abnormality of the esophagus; if there is no obstruction to the flow of barium through the esophagus, and if the large-caliber Ewald stomach tube can be easily passed into the stomach, the procedure of choice is gastroscopy. If these conditions cannot be met, it is wiser to use esophagoscopy.

X-ray diagnosis of hiatal hernia is difficult when the hernia is very small and its relationship to the diaphragmatic hiatus cannot be readily determined, or when the herniated portion of the stomach assumes a tubular configuration very similar to that of the esophagus, instead of the usual dilation of the hernial pouch. In two cases where the latter condition occurred the x-ray findings suggested the presence of esophageal varices. Indeed, esophageal varices were diagnosed initially in some patients having cirrhosis of the liver; on reexamination by endoscopy and x-ray these patients were found to have hiatal hernia and not esophageal varices. Such a confusion of diagnosis may occur in patients with hepatic enlargement and gross hemorrhage from the upper gastrointestinal tract, since it might be assumed that hemorrhage is caused by esophageal varices when actually a hiatal hernia is present. Even if esophageal varices are present, bleeding may be the result of congestion, erosion and possible strangulation by a hiatal hernia.

Gastroscopy

The criteria for the diagnosis of hiatal hernia by means of gastroscopy have been adequately set forth by Schindler.⁵ As the gastroscope is withdrawn, a

contracted portion of the stomach is encountered at the region of the hiatus which may momentarily darken the field. Above this ring a secondary pouch lined with gastric mucosa is entered; when the instrument is further withdrawn, the field is again darkened by the esophageal occlusion. The authors have observed, in instances in which the hiatus was relaxed and the usual constriction was minimal or absent, a rhythmic undulation of the gastric mucosa synchronous with respiration which is caused by the movement of the adjacent margins of the diaphragmatic hiatus against the wall of the stomach. This produces a wave-like to-and-fro motion of the stomach wall which is highly characteristic and never dependent upon intrinsic peristalsis.

Esophagoscopy

The authors prefer the newer instruments which are introduced by means of rubber-tipped obturators. The most striking feature encountered during esophagoscopy is that in nearly all cases the esophagus is shortened. This is a secondary or acquired shortening as a result of the contraction of the longitudinal muscle of the esophagus. In a few cases, particularly in those of the paraesophageal type, the esophagus is not appreciably shortened and may even be buckled. Beyond this shortening, a definite pouch line with gastric mucosa can be seen and in most instances the distal opening into the main body of the stomach can be observed, although in a few cases, despite considerable maneuvering of the instrument and the patient, this has been impossible. If the hiatus is of normal caliber, or is constricted, the stomach is drawn through the hiatus as if by a purse string, with radiating folds converging upon a narrow or slit-like opening. The resultant abnormalities within the hernial pouch or within the esophagus are usually easily recognizable by an experienced endoscopist, but when the gastric mucosa within the pouch has become atrophic it may be difficult to differentiate clearly between atrophic gastric mucosa and the usually pallid, smooth esophageal mucosa. A mucosal biopsy specimen may be taken through the esophagoscope for confirmation.

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Diseases and Deaths

A Summary of Data from the Los Angeles County General Hospital, 1918 to 1948

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{This is Part I of an article in two parts. Part II will appear in a later issue.}

Part I

THE VARIETY OF DISEASES that afflict mankind, their relative incidence in different times, places and persons, their causative factors, manifestations, course, response to treatment and eventual termination present innumerable problems of personal importance as well as scientific interest. Many of them may be solved by the detailed recording and careful analysis of past experiences. Accumulations of such observations and improvements in their interpretation have contributed greatly to the development of modern medicine. Yet, much remains obscure.

The relative frequency and the seriousness of different diseases may only be surmised from the fragmentary data at present available. No large populations have been observed carefully from birth to death to record the incidence of all functional and organic disturbances, or even those serious enough to cause persons to seek medical and hospital care. Questionnaire¹¹ and interview surveys¹⁶ suffer from ignorance, forgetfulness, and deliberate deception, as well as the use of inadequate diagnostic terminology. The records of physicians in general practice, who have intimately observed a large number of persons and treated them for all sorts of conditions over long periods of time, have rarely been compiled and reported.⁶

Sickness and absenteeism records such as those of insurance companies,⁷ military forces,¹³ industrial organizations and other agencies are generally confined to restricted samples of a population over brief periods of time and seldom yield complete and accurate diagnostic data. Extensive data regarding numbers of patients, and visits to clinics and other health service agencies have been compiled in recent years but few published reports give much information regarding the varied diagnoses made on these patients over a long period of time. The records of the California Physicians' Service and similar medical service groups contain a wealth of data for such analysis.

• Classification of the 2,557,035 diagnoses made in 1,168,139 different patients at the Los Angeles County General Hospital in the period 1918-48 has been compiled according to the new International List of Causes of Diseases and Death. Similar tabulation of the 377,776 diagnoses made in the 112,409 patients who died while in the hospital reflects the fatality rates associated with these diagnoses. Striking differences are shown in the incidence and fatality rates in the various conditions and great changes have occurred in both during this time. Defects and sources of error in these data are recognized, but they offer a wealth of valuable material for further study and interpretation.

Extensive morbidity tabulations are published periodically by governmental agencies, but these are generally restricted to only a few conditions, chiefly communicable diseases,¹⁴ and are notoriously incomplete. The confusion generated by inadequate morbidity reporting is exemplified by the recent concern over the apparent increase in numbers of cases of tuberculosis although all that had happened actually was more efficient case finding and reporting.⁵

Mortality statistics derived from death certificates have been extensively compiled in all parts of the world, over long periods of time, by governmental agencies,¹² insurance companies⁴ and other organizations. Such data have been extensively studied and correlated with various characteristics of the population. Most of these studies refer to the primary or chief cause of death as stated on the death certificate. They do not reveal the incidence of other conditions which might have been present or even might have contributed to the death of the patient, and they give no information regarding the incidence of non-fatal conditions from which patients recover.

More extensive and reliable information may be obtained by the observation and study of large

groups of patients in hospitals. In hospital reports all over the world there is a profusion of data for successive years on the frequency of various conditions and the numbers of patients who died of each condition. Elaborate systems for classification and indexing of such records have been devised and installed, such as those at Johns Hopkins Hospital,¹⁰ and the Combined Hospitals of New York City.³ Few general tabulations of the statistics of a number of hospitals, or even of a single large hospital over a large number of years, however, have been published which might give comprehensive and reliable data. They have been utilized chiefly for the study of a few particular conditions and only by special inquiry can data on other diagnoses be obtained. Total figures for New York City hospitals have been collected for single years, comprising more than 100,000 patients per annum, but the figures for successive years have not been combined and as yet only fragmentary data by individual diagnosis have been published.

The outstanding contribution in this field was the statistical report on the 80,000 patients treated at the Johns Hopkins Hospital from 1892 to 1911 compiled by Hoffman⁸ more than a third of a century ago. The report presented a tabulation showing how many patients had each disease, how many of them were discharged and how many died. The ratio of discharges to deaths relative to any one condition could be easily calculated.

The Los Angeles County General Hospital has grown greatly since it was founded in 1878. Then it had fewer than a hundred patients; its present capacity is more than 3,600 beds.⁹ In 1918 the number of patients discharged was less than 12,000; now more than 75,000 are discharged annually. The 1,168,139 patients discharged from the Los Angeles County General Hospital during the 30 years 1918-1948 made up about one-fifth of all hospitalized patients in this rapidly growing community. A review of the records of the hospital reflects both the changes in the population and the changes in disease and its care during this period.

There were, in general, about as many males as females admitted to the General Hospital throughout that time, with a similar number of beds on the male and female services. The pronounced increase in the older age group, greater than that shown by successive census figures for the population of the country, probably is owing chiefly to the greater success in prevention and home treatment of the diseases of infancy, childhood and young adults than of diseases in the geriatric field.

Patients of Latin-American or Mexican origin, the majority of whom were born in the United States, have constituted about one-fifth of all patients treated at the hospital throughout this time. For the

period as a whole, Negroes constituted about one-tenth of all patients treated, but the proportion has greatly increased in recent years. In 1918 about 5 per cent of all patients were Negroes; in 1948, more than 25 per cent. European born patients made up about one-fifth of the total admitted to the hospital in the early years of the period; now less than one-twentieth are European born—a parallel to a change in the nature of the population of the entire county.

Altogether 112,409 patients, or 10 per cent of all patients admitted, died at the hospital during the 30-year period. Since fatality rates for most conditions are higher in older patients, the increase in the average age of the patients admitted to the hospital might have been expected to result in an increase in the proportion dying within the institution in recent years. Instead, owing to the great advances in the efficiency of treatment, there has been an actual decline in the fatality rates. In earlier years covered by the study, about 12 per cent of all patients at the Los Angeles County General Hospital died there, lately less than 9 per cent.

Patients have been treated at the Los Angeles County General Hospital for a great variety of diseases. No two patients are affected in an identical way. Etiological factors are multiple, both external and internal. A myriad of different hereditary or congenital abnormalities, developmental or nutritional defects, physical or chemical environmental factors, bacteriological, sociological or psychological stimuli may lead to disturbances in health. Differences in the substrate or internal milieu of the patient afflicted result in wide differences in the diseases that develop in different parts of the body, at different ages, or in bodies of different kinds, even though the external causative agents may be the same in one case as in another. Nevertheless, it is possible to group sicknesses together when closely related even though they may not be entirely identical, and the recognition and study of such disease entities is of undoubted pragmatic worth.

The terminology used in describing the different diseases varied with different physicians and at different times, in accordance with changes in medical ideas. In the early years, diagnoses were often made simply as a group of symptoms. Usually, however, the location of the lesion was recorded, and frequently its chief causative factor. The Standard Nomenclature of Disease published by the U. S. Public Health Service in 1919¹⁵ was used at the Los Angeles County General Hospital until it was replaced there in July 1948 by the Standard Nomenclature of Diseases published by the American Medical Association.¹ A list of the case numbers of patients with each diagnosis was maintained manually from 1909 to 1928, and since then by punch card and mechanical equipment. From these the

frequency of occurrence of each condition among all patients discharged annually, and among those dying in the hospital was determined.

The relative frequency of the different diagnoses varies with the nomenclature and classification used. Many of the titles in the 1919 Standard Nomenclature of Diseases represented synonyms or subclasses, and so the true incidence of diseases was often obscured. For example, 61,515 cases were listed as *pregnancy*, but 36,519 others were recorded under the term *normal pregnancy*. Similarly, the 63,930 cases of parturition were divided among eight possible diagnoses according to position. Combination of the different diagnoses was therefore needed if the totals were to be correctly evaluated.

Interpretation of the tabulated data was also complicated by the difficulty of comparing the different diagnoses which were listed alphabetically and so did not show the anatomical or etiological groupings of diseases. Accordingly, the data were rearranged; more than 6,000 classes of the older nomenclature were condensed into the 800 rubrics used in the new International List of Causes of Disease and Death.¹⁷ In some cases, where two related diagnoses were made on the same patient, this resulted in duplication. Such duplication was particularly frequent in diseases involving multiple sites as in tuberculosis, syphilis or cancer. The total for such diagnoses was accordingly greater than the actual number of patients concerned. The amount of duplication was usually slight, but excessive reliance should not be placed on small differences, and in some cases further study may be needed to support conclusions based on these data.

Interesting differences in the relative frequency of occurrence of the 2,557,035 diagnoses made in the 1,168,319 patients discharged during the 30-year period, and in the changes in such incidence during this time, are apparent. The proportion of patients with each of the 377,776 diagnoses made among the 112,409 patients who died in the General Hospital does not actually show the real case fatality rate, as patients with irrelevant minor diagnoses often died as a result of entirely unconnected concomitant conditions, while others with incurable disease were sometimes discharged only to die of it elsewhere. Nevertheless, the frequency with which any disease may be associated with a fatal termination of hospital stay does usually suggest the seriousness of the condition.

Using the individual titles in the new International List of Causes of Disease and Death, the most common diagnoses at the Los Angeles County General Hospital during the past 30 years consisted of normal pregnancy and delivery. The 218,158 such diagnoses, or 8 per cent of the entire number of diagnoses made during this time, represented more

TABLE 1.—The Ten Most Frequent Diagnoses at the Los Angeles County General Hospital, 1918-1948

International List No.		No. of Classes in 1919 Nomenclature	Discharges	Deaths
660	Delivery—no complication	13	218,158	642
N908	Multiple and open wounds unspecified ..	33	61,643	3,396
491	Bronchopneumonia	8	49,330	23,795
002	Tuberculosis	11	44,430	14,021
420	Arteriosclerotic heart disease	16	39,493	14,647
525	Chronic interstitial pneumonia	7	35,084	1,021
510	Hypertrophy of tonsils..	11	33,758	81
650	Abortion	5	33,715	435
029	Syphilis	1	31,925	1,957
443	Other hypertensive heart disease	1	30,488	9,664
			578,024	69,659
	Total diagnoses		*2,557,035	377,776
	Patients		*1,168,139	112,409

*Difference between number of diagnoses and number of patients is owing to fact that sometimes several diagnoses in a single case were recorded in files.

than three times the next most frequent diagnosis, and this proportion varied little during the successive decades. Only 642, or 0.3 per cent of the patients with diagnosis of normal pregnancy and parturition died in the hospital (Table 1).

Of 33,715 cases in which the diagnosis was abortion or premature delivery, 435 or 1.2 per cent were in patients who died in the hospital. During this same time there were 23,135 diagnoses of complications of pregnancy and childbirth, of which 2,142 or 9 per cent were in patients who died in the hospital. The incidence of pregnancies has increased while that of abortions has remained about the same, but the incidence of complications has declined sharply in recent years. Improved prenatal care and the prevention of the occurrence of complications appears to have affected maternal mortality in this series even more than has the more effective treatment of obstetrical complications after they had arisen.

Traumatic injuries with multiple or unspecified wounds were the next most common conditions. There were 61,643 such diagnoses with 3,396 deaths. The cause of such injuries was not shown in the classifications used here, but the proportion caused by traffic accidents has increased while those caused by industrial accidents or personal attacks have diminished.

The third most frequent diagnosis, bronchopneumonia, was recorded 49,330 times or 2 per cent of the total number of diagnoses. This condition greatly increased in the last decade of the 30-year period owing to the increased age of the population and the relatively lowered mortality from other conditions. Nearly half, 22,795, of all the patients with broncho-

TABLE 2.—Diseases and Deaths at the Los Angeles County General Hospital, 1918-1948

Clinical Diagnoses or System Involved	Number of Classes in 1919		Deaths
	Nomenclature	Discharges	
I. Infections	629	273,891	39,804
II. Neoplasms	488	101,724	27,549
III. Metabolic	182	54,796	7,888
IV. Blood	59	9,434	3,061
V. Mental	269	146,643	5,736
VI. Nervous system	450	153,007	33,678
VII. Circulatory system.....	248	275,982	86,248
VIII. Respiratory system	235	245,695	42,691
IX. Digestive system	485	194,692	29,031
X. Genito-urinary system	419	188,086	20,253
XI. Pregnancy	135	274,998	3,219
XII. Skin	226	72,104	5,222
XIII. Bones	228	40,250	2,115
XIV. Congenital	230	21,687	5,977
XV. Infancy	59	39,088	13,201
XVI. Ill-defined	361	73,597	19,052
XVII. Violence	1,313	391,361	33,051
Total		*2,557,035	377,776
Patients		*1,168,139	112,409

*Difference between number of diagnoses and number of patients is owing to fact that sometimes several diagnoses in a single case were recorded in files.

pneumonia died in the hospital. The hospital mortality rate for this disease was higher than for any other. The improved prognosis owing to the sulfa drugs and antibiotics in later years is obscured by the large numbers of cases in which terminal bronchopneumonia was a concomitant of some other more important primary condition such as malignant disease or cardiac failure. Only 13,654 cases of lobar pneumonia were recorded in the 30-year period, and there was a slight decrease in incidence in the later years. Only one-fourth of the patients with lobar pneumonia died in the hospital, and the mortality rate in the later years of the period dropped sharply as a result of improved treatment.

Pulmonary tuberculosis was diagnosed in 44,430 cases, and 14,021 of the patients died in the hospital. For the entire period it was the fourth most frequent diagnosis and third among causes of death in the hospital.² In the earlier years of the period it was foremost in both respects. It has declined greatly in recent years despite the fact that county institutions which include the Los Angeles County General Hospital now care for most of the patients in the community who have advanced pulmonary tuberculosis.

Arteriosclerotic heart disease was the fifth most frequently diagnosed disease (39,493 cases) but was second among the causes of death in the hospital; 14,647 (35 per cent) of the patients died. Cardiovascular-renal conditions and malignant tumors have become by far the most important causes of death.

Malignant neoplasms, which loom so largely in autopsy statistics, do not appear among the chief causes of admittance because of the large number

of different diagnoses among which they are divided. The aggregate of all cases of neoplastic disease was 101,724 and the number of deaths in the hospital was 27,549. The incidence of diagnosis of neoplastic disease, especially of the respiratory tract, has greatly increased in recent years.

Of the 17 chief divisions of the new International List of Causes of Diseases and Death, the most frequently diagnosed in patients entering Los Angeles County General Hospital was trauma from external violence, including poisoning (Table 2). Nearly 15 per cent of all diagnoses made were in that classification. Next in order were circulatory disturbances, pregnancies, and infections, each making up about 11 per cent of all diagnoses. Respiratory diseases made up almost 10 per cent.

Circulatory diseases caused more deaths in the hospital than any other disease. Next was respiratory diseases, then infections, nervous diseases, violence, digestive diseases and neoplasms, in that order.

Hundreds of pages of tabulations, prepared for this study, have been copied in microfilm form and filed in the Pathology Department of the Los Angeles County General Hospital, the Los Angeles County Medical Association library, and other places for use in further investigations. Discretion must be exercised in comparing the cumulative clinical experience of the Los Angeles County General Hospital with data from other times and places. The magnitude of the material and the long time period concerned, however, make it especially valuable for studies of the relative frequency and fatality rates from different conditions and the changes which have taken place in them during the past generation.

Box 500, Olive View.

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A Practical Device for Leg Traction at Home

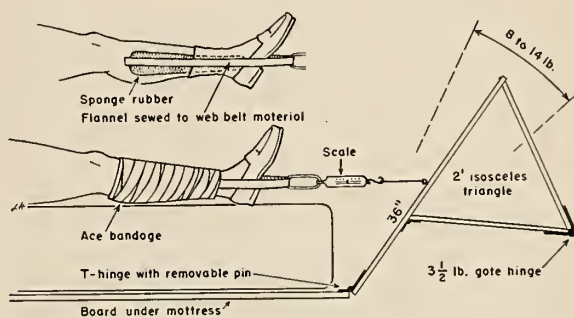
ANGELO M. MAY, M.D., and G. F. NORMAN, M.D., San Francisco

TRACTION ON ONE leg or both is frequently used in the treatment of many orthopedic conditions, particularly those involving the lower part of the back, including mild forms of disease owing to ruptured intravertebral discs.

Hospitalization is so costly that the expense often seems unwarranted for leg traction alone. Yet apparatus for pulley traction set up at home has been found difficult to manage, destructive to furniture, and otherwise impractical. To solve the problem a traction device using the principle of the lever rather than a pulley was built (see accompanying diagram).

It consists of a 1 by 4-inch board frame put together with ordinary hinges to form an isosceles triangle. To supply the weight necessary for traction, a hinge heavier than the others is used at the angle farthest from the bed (see diagram). A standard $3\frac{1}{2}$ -pound gate hinge gives the amount of pull needed in most cases. A hinge with a removable pin is used to attach the frame to an ordinary bedboard that is placed under the mattress. As the frame can be detached from the bedboard simply by withdrawing the pin from the hinge, the bed can be made up easily when the traction device is not in use.

A spring scale in the line of traction to measure the amount of pull is optional. The weight of pull can be adjusted by changing the degree of the obtuse



angle between the bedboard and the side of the frame that is hinged to it.

The device can be made for about eight dollars, and with it traction can easily be applied by the patient himself.

To prepare the leg for traction, pads of sponge rubber are laid along the medial and lateral aspects and a strip of web belting with a covering of flannel is placed over the rubber, with the ends of the strip on either side of the leg and a loop of it below the foot. Ace bandage is used to hold the rubber and belting in place. The loop of the sling is then attached to the board frame as shown in the diagram. Wearing a shoe of the "loafer" type serves to keep the web belting from being drawn inward and pressing uncomfortably upon the ankle.

450 Sutter Street.

Testicular Torsion and Acute Epididymitis

Procaine Infiltration of the Spermatic Cord as an Aid in Differentiation

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IN SOME CASES it is difficult to distinguish between acute epididymitis and testicular torsion by review of the usual factors—onset of pain, history of previous episodes, symptoms referable to the lower urinary tract, palpation of the scrotum, Prehn's sign and results of laboratory studies.

Using spermatic cord infiltration with procaine (a procedure advocated by Kulenkampff² and Smith³ for treatment of acute epididymitis) in two cases in which there was a problem of differentiation between testicular torsion and epididymitis, the author came upon an additional means of distinguishing between the two commonly confused conditions.

One patient, 21 years of age, had been lying down when there was acute onset of excruciating pain centered in the left side of the scrotum and radiating to the left inguinal region. It was constant and was made worse by motion. Observed upon physical examination were acute tenderness of the scrotal contents on the left side, normal intrascrotal anatomical relationships on both sides, but pronounced thickening of the epididymis and the distal portion of the spermatic cord on the left. No abnormality was noted upon rectal examination. There was no evidence of infection in three-glass specimens of urine. Fifteen cubic centimeters of 1 per cent procaine hydrochloride was infiltrated into the left spermatic cord just distal to the external inguinal ring. After sufficient anesthesia was obtained to permit adequate scrotal palpation, the testis was manipulated. The procedure was slightly painful despite the anesthesia, but after the organ had been rotated 360 degrees counterclockwise the patient experienced a sudden "give" with release of all painful symptoms. He was immediately able to walk and exercise without scrotal pain. An hour later the scrotal contents were normal to palpation on both sides. As it was felt that the patient had had acute torsion, bilateral orchiopexy was done the following day. Upon inspection during the procedure no thickening of the epididymis or the spermatic cord on the left was noted. There were no visible vascular changes. High investment of the spermatic cord by the tunica vaginalis, present bilaterally, was felt to be the cause of the acute torsion.

The other patient, 18 years of age, had acute onset of severe pain in the left side of scrotum while shaving. There was a history of several previous similar attacks on the same side with spontaneous remission. The contents of the scrotum on the left side were extremely tender and there was anterolateral displacement of the epididymis. The epididymis and the distal spermatic cord were thickened. The scrotal contents on the right side were normal. No abnor-

• Infiltration of the spermatic cord with procaine was used in two cases in differentiating torsion of the testis from acute epididymitis. Detorsion was accomplished by manipulation during anesthesia, making it possible to do a corrective operation at a convenient time rather than carry it out as an emergency measure.

malty was noted upon rectal examination, and urinalysis revealed no evidence of infection. Partial anesthesia was obtained by infiltration of 10 cc. of 1 per cent procaine hydrochloride into the left spermatic cord. Upon counterclockwise rotation of the testis, the patient felt immediate relief of pain and an hour later the previously noted intrascrotal abnormalities were no longer present. A diagnosis of testicular torsion was thereby confirmed and the patient was scheduled for bilateral orchiopexy three days later. Next day, however, asymptomatic, he cancelled the arrangements for operation.

TECHNIQUE

The technique used for infiltration of the spermatic cord with procaine and for detorsion of the testis is as follows: The spermatic cord is grasped between the thumb and forefinger of the left hand as far from the testicle as possible. The skin overlying the cord is then cleansed with alcohol and a small surface area anesthetized with procaine. Ten to 20 cc. of 1 per cent procaine hydrochloride is infiltrated throughout the cord as it rests between thumb and forefinger, with care taken to avoid intravascular injection. After 10 minutes the scrotum is palpated. If anesthesia is not adequate, the procedure may be repeated. The involved testis and epididymis may then be manipulated.

Chute¹ stated that commonly torsion occurs from within, outward and forward. Hence, the first attempt at detorsion should be a gentle twist in the opposite direction. It is important to bear in mind that torsion may involve from one-half turn to two full turns of the cord. It has been the author's experience that anesthesia of the cord relieves approximately 90 per cent of the associated pain. It is completely relieved only when the testicle is returned to the normal position, which may occur suddenly with adequate manipulation.

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DISCUSSION

Smith⁴ described manual detorsion as a method of therapy for testicular torsion and expressed belief that by that means operation could be avoided. The author does not suggest that manipulation under local anesthesia should be a substitute for bilateral orchiopexy. Rather, it is felt that by this means an accurate diagnosis can be obtained in questionable cases and, when torsion exists, operation can be scheduled rather than carried out as an emergency measure. Should complete relief of pain not be obtained by this method and a suspicion of torsion persist, immediate operative intervention is indicated.

Cord anesthesia *per se* will permit diagnostic palpation of the scrotal contents and, should epididymitis be found, will serve as excellent therapy for the condition.

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A New Vasoconstrictor—A Preliminary Report

HARRY STEINBERG, M.D., Los Angeles

IN THE SEARCH for an efficient vasoconstrictor with fewer side reactions, particularly regarding rebound congestion and sympathicomimetic action in other organs, tests were begun in March 1951 using a new drug, Otrivin.^{®*} This compound is the hydrochloride salt of phenyl-aminomethylimidazoline, a chemical analogue of Privine.[®] The preparation used was a 0.05 per cent solution of Otrivin with 0.02 per cent Bradosol[®] as a preservative. The pH of the solution was 6.18.

Otrivin was prescribed for 74 adult patients of both sexes who were observed at the author's office or at the Otolaryngology Clinic of the Veterans Administration Center, Los Angeles. All had received other nasal solutions previously. Each patient received a 15 cc. (1½-ounce) bottle of the Otrivin solution and was instructed to use three drops in each nostril three times a day if necessary. Thirty-six patients had two courses of treatment and 14 had three or more, each course lasting for one to two weeks.

Nine of the patients using the new drug had experienced irritation, increased nasal discharge and

•Otrivin,[®] a compound of the hydrochloride salt of phenyl-aminomethylimidazoline, was administered to 74 patients for varying periods as a nasal vasoconstrictor. Seventy-three had relief of nasal congestion for from five to six hours—longer periods than had been obtained with other vasoconstrictors they had used. No pressor effect was noted.

congestion with previous nasal medication. One of them stated that Otrivin became less efficient in relieving congestion and gave shorter periods of relief with repeated administration. This patient had had similar experiences with other vasoconstrictors.

Otrivin relieved nasal congestion for from five to six hours, a longer period than that observed with other vasoconstrictors, in 73 patients. There were no complaints of smarting, headache, flushing, or fullness. That there was no systemic absorption of the drug was evidenced by the absence of a pressor effect such as headache, increased pulse rate, palpitations, visual disturbance or nervousness.

For routine otorhinolaryngological examination of patients for whom a nasal vasoconstrictor was required, the solution was applied by packs and sprays. Examination could be efficiently performed 15 seconds after packing or spraying. Relief of nasal congestion was reported as lasting from five to six hours.

From the Otolaryngology Service, Veterans Administration Hospital, Los Angeles.

Reviewed by the Veterans Administration and published with the approval of the Chief Medical Director. The statements and conclusions of the author are the result of his own study and do not necessarily reflect the opinion or policy of the Veterans Administration.

* Supplied for clinical trials by Ciba Pharmaceutical Products, Inc., Summit, N. J.

Pneumoperitoneum in Perforated Peptic Ulcer

Factors in Roentgenographic Demonstration

WALTER GAINES, M.D., Burlingame

WHEN ROENTGENOGRAPHIC EXAMINATION of the abdomen of a person suspected of having a perforated peptic ulcer is carried out, the radiologist is frequently asked about the reliability of findings, especially when no free intraperitoneal air is demonstrated. Many of the present standard references in radiology^{1, 5, 10} do not indicate the frequency of positive or negative findings in such examinations. Feldman² stated that "pneumoperitoneum is demonstrated in about 80 per cent of the cases of acute perforations," and Sante¹¹ made the same estimate, but neither indicated the source of his figures or the number of cases upon which his statement was based. Most of the data on other series reported in the literature are in fairly close agreement with the statements made by Sante and Feldman. (A number of reports are summarized in Table 1.) There is, however, little agreement as to whether the time interval between the acute perforation and the roentgen examination bears any constant relation to the presence of demonstrable pneumoperitoneum.^{6, 7, 8} In addition the evidence is inconclusive as to whether the site or size of the perforation bears a constant relationship to demonstrable pneumoperitoneum. A lively controversy still exists as to which is the optimum position for the demonstration of free intraperitoneal air.^{6, 9, 16}

ANALYSIS OF THE MATERIAL

The proved cases of perforated ulceration of the stomach and duodenum observed at the San Francisco City and County Hospital in the eight-year period ended July 1, 1950, were reviewed. All cases in which there was a final diagnosis of perforation of benign ulceration were included, whether or not the perforation was sealed off or adherent to liver or pancreas at the time of operation or autopsy. The total was 337 cases. Data on the site of lesions, incidence by sex, and the means of diagnosis are given in Table 2.

Roentgenologic examination was performed in 324 cases (96 per cent). The roentgenograms were available for review in 313 cases, and in the remain-

• Evidence compiled in review of data on 324 cases of perforated gastric or duodenal ulcer indicated that pneumoperitoneum is more likely to be demonstrated in roentgen films made within six hours after perforation than in films made after a longer interval. In several cases films made early did not show intraperitoneal gas and later films did. There appeared to be no constant relationship between the size of the perforation and the incidence of demonstrable pneumoperitoneum. Pneumoperitoneum was less often demonstrated in cases of posterior perforation than it was when the lesion was at an anterior site.

In many cases roentgen examination was performed with the patient in both the erect and the left lateral decubitus positions. These two roentgenographic views were equally reliable and there was agreement between them in 94 per cent of the cases. Clinical factors, however, may influence decision as to which position should be used in each case. Occasionally when intraperitoneal gas is not demonstrated in one view, it may be observed in films made with the patient in the other position.

ing 11 cases in which roentgen examination was done the hospital records included reports on the reading of the films. The technique of examination consisted of roentgenograms taken with the patient upright and/or in the lateral decubitus position. Both projections were used in 78 per cent of the cases, the value of the left lateral decubitus view having been well demonstrated in this hospital in 1940.¹⁶ In addition, in many cases the patient was examined in the prone or supine position. Only the 324 cases in which roentgenologic examination was done were included in this study. There was gastric perforation in 140 cases and duodenal perforation in 184. Pneumoperitoneum was observed roentgenographically in 111 (79 per cent) of the cases of gastric perforation and in 140 (76 per cent) of the cases of duodenal perforation.

The subjective manifestations of perforation of an ulcer are such that usually the time of onset is readily established. It is feasible to estimate, at least

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within intervals of six hours, the elapsed time between perforation, hospital admittance and roentgenologic examination. From the patient histories and the hospital records it was possible to determine the time that elapsed between acute onset and roentgenologic examination in 313 of the 324 cases. In Table 3 the cases are grouped according to time intervals. The term "positive" is used in Table 3 to indicate that pneumoperitoneum was demonstrated in at least one of the views taken. In 204 cases of perforation in which roentgenologic examination was performed within six hours of the onset of acute symptoms, pneumoperitoneum was demonstrated in 166 instances (81 per cent). In the remaining 109 cases the examination was performed after six hours and pneumoperitoneum was demonstrated in 79 instances, or 72 per cent.

It has never been settled as to whether or not any relationship exists between the size of the perforation and the presence or absence of pneumoperitoneum (disregarding the apparent "common sense"

viewpoint that the larger the perforation the better the chance of escape of gas from the gastric lumen). In almost all cases in which the lesion was observed at operation the size of the perforation was estimated. In the cases in which the perforation was noted at autopsy by the coroner's physician, rarely was the size mentioned. An estimate of the dimensions of the perforation was available in 298 cases (92 per cent). There is no constant relationship between the size of the perforation and the incidence of pneumoperitoneum (Table 4).

So far as could be determined there is nothing in the literature as to the correlation of the position of the perforation, anterior or posterior, with the incidence of pneumoperitoneum. Information as to the site of the lesion was available in 311 (95 per cent) of the 324 cases. It is summarized in Table 5. For the purposes of this summary lesser curvature and anterior perforations were considered together. In general, posterior ulcerations were well described, owing to the difficulty in locating them during the surgical exploration. In 82 per cent of the cases in which perforation occurred through the lesser curvature or the anterior wall of the stomach, pneumoperitoneum was demonstrated, whereas in only six (55 per cent) of the 11 cases of posterior perforation was the presence of free air observed roentgenographically. Similarly, pneumoperitoneum was

TABLE 1.—Incidence of Pneumoperitoneum in Ruptured Ulcers as Reported in the Recent Literature

Reference		Cases with Roentgen			Pneumo- peritoneum —Noted—	
		Proved Cases	Exam- ination	Per Cent	No. Cases	Per Cent
Vaughan and Singer	(1933)	?	75*	....	53	70
Johnson	(1937)	72	42	58	35	83
Payne and Rigler	(1938)	47	38	81	28	74
Thaxter	(1940)	?	44	....	36	82
Treiger	(1947)	90	23	25	14	61
Kornblum	(1948)	128	54	42	35	65
Gasparini and Hood	(1951)	73	52	71	46	88
Present study	(1951)	337	324	96	251	77

* Fluoroscopic examination.

TABLE 2.—Method of Diagnosis and Sex of Patients with Perforated Ulcers

	Gastric	Duodenal	Total—	
			No.	Per Cent
Total number of proved cases	146(43%)	191(57%)	337	100
METHOD OF DIAGNOSIS				
Surgical	133	178	311	92
Autopsy	13	13	26	8
SEX DISTRIBUTION				
Male	133	182	315	93
Female	13	9	22	7

TABLE 4.—Correlation of the Size of the Perforation with the Presence of Pneumoperitoneum

SIZE Mm.	GASTRIC PERFORATIONS			DUODENAL PERFORATIONS		
	No.	Positive	Per Cent Positive	No.	Positive	Per Cent Positive
1	5	3		8	5	
2	16	14	78	30	21	76
3	29	21		49	39	
4	10	8		17	13	
5	19	16		14	11	
6	2	2		6	5	
7	3	3		4	3	
8	7	4		4	3	
9	0	0		3	3	
10	23	19	80	22	19	87
11-35	18*	14		9	9	
Total	132			166		

*One patient had two simultaneous perforations (15 mm. and 20 mm.), considered as one perforation for the purposes of this table.

TABLE 3.—Correlation of the Time Interval Between Perforation and Roentgenologic Examination with the Presence of Pneumoperitoneum

TIME	GASTRIC PERFORATIONS			DUODENAL PERFORATIONS			TOTAL		
	Number	Positive	Per Cent Positive	Number	Positive	Per Cent Positive	Number	Positive	Per Cent Positive
Hours									
1- 6	88	72	71*	116	94	73*	204	166	81
7-12	30	21		41	27		71	48	
13-18	8	5		8	7		16	12	
19-24	2	2		4	4		6	6	
Over 24	9	7		7	6		16	13	72*
Total	137			176			313		

* Per cent positive of all perforations examined after six hours.

TABLE 5.—Correlation of the Site of Perforation with the Presence of Pneumoperitoneum

SITE	—GASTRIC PERFORATIONS—			—DUODENAL PERFORATIONS—		
	Number	Positive	Per Cent Positive	Number	Positive	Per Cent Positive
Lesser curvature and anterior.....	124	101	82	167	129	77
Posterior.....	11	6	55	9	5	55
Total.....	135			176		

demonstrated by roentgen examination in 77 per cent of cases of anterior duodenal perforation and in only 55 per cent of cases in which there was posterior perforation.

In an attempt to evaluate the reliability of the various positions advocated as optimal for the demonstration of pneumoperitoneum the 254 cases in which the patient was examined in both the upright and the lateral decubitus positions were analyzed. The data are presented in Table 6.

DISCUSSION

This report deals only with perforated ulceration observed at operation or at autopsy. It is well known that gastroduodenal perforation can heal without surgical intervention. The reports listed in Table 1 are in fairly close agreement as to the incidence of demonstrable pneumoperitoneum in gastroduodenal perforation. The percentages vary from a low of 60 in the series reported by Treiger¹⁴ to a high of 88 in that reported by Gasparini and Hood.⁴ Many reasons have been advanced as to why intraperitoneal gas is either not present or not demonstrable in every case. Payne and Rigler⁹ list some of them as follows: (1) Liver adherent to diaphragm; (2) perforation occurring below the fluid level of the stomach; (3) absence of gas in the viscus at the time of perforation, (4) temporary plugging of the perforation; (5) prolapse of the redundant mucosa into the perforation; and (6) miscellaneous technical factors (patient too ill to cooperate).

In many of the cases in the present series in which pneumoperitoneum was not demonstrated, the surgical and autopsy reports indicated the reasons. The following quotations were taken directly from reports on gastric lesions: "Perforation sealed off by fibrin"; "Posterior perforation adherent to the left lobe of the liver and the pancreas"; "Perforation sealed off." Notations in reports on duodenal lesions were: "Perforation sealed off by omentum"; "Site of perforation sealed off by omentum and plastered against the liver"; "Perforation closed by a tab of fat."

The low incidence of perforation in female patients with gastric or duodenal ulcer in the present series accords with related data in previous reports.¹²

There is, however, little agreement as to the relationship between the duration of the perforation and

TABLE 6.—Analysis of 254 Examinations with Both Upright and Left Lateral Decubitus Projections

	Gastric Perforations	Duodenal Perforations	Total
Agreement between the two projections			240
Both positive	79	102	181
Both negative	23	36	59
Disagreement between the two projections			14
Upright view positive (decubitus negative)	3	4	7
Decubitus view positive (upright negative)	3	4	7
Total	108	146	

the probability of demonstrating pneumoperitoneum. Thaxter¹³ cited Moynihan's statement that "the amount of gas and fluid will depend on the length of time that has elapsed since perforation: if less than six hours have passed there will be little or no gas." Levine and Solis-Cohen,⁸ speaking of patients suspected of having a ruptured viscus, said, "The greater the interval of time between the onset of symptoms and the roentgenoscopic examination, the greater the likelihood of positive findings and the larger the accumulation of air." Presumably these are clinical impressions since no data are listed by the authors. Available statistics cast some doubt upon these impressions. In Johnson's study⁶ the interval in 35 cases in which pneumoperitoneum was demonstrated ranged from one hour to 36 hours and the average was eight and one-half hours. In 22 out of the 35 cases the interval was less than ten hours. In seven cases in which free air was not demonstrated the interval between onset of symptoms and roentgen examination was from one hour to 120 hours and the average was 36 hours. Thaxter¹³ reported that pneumoperitoneum was demonstrated in 73 per cent of patients examined within six hours of the onset of symptoms. In the present series pneumoperitoneum was noted roentgenographically more often when examination was done within the first six hours than it was when a longer time had elapsed (Table 3). These findings would seem to contradict the statements of Moynihan and Levine.

In two cases in the present series there was an interesting sequence of findings in regard to this time relationship. One was that of a man with posterior perforation 8 mm. in diameter of the first

portion of the duodenum. Roentgenologic examination was carried out approximately three hours after the acute onset of symptoms, with the patient in both the upright and the lateral decubitus positions, and free intraperitoneal gas was not demonstrated. As the clinical diagnosis was not definite, surgical exploration was not performed immediately. The patient was reexamined roentgenologically eight hours later (eleven hours after the acute onset) and at that time intraperitoneal gas was noted in films taken in both positions. In the other case, that of a man with an anterior duodenal perforation 15 mm. in diameter, there was no evidence of gas in films taken with the subject in both the upright and the lateral decubitus position four hours after the acute onset, but in films taken three and one-half hours later (seven and one-half hours after onset), again in both positions, free intraperitoneal gas was observed. These were the only cases in which more than one roentgenologic examination was carried out in the same episode of perforation. The sequence of findings suggests that if for any reason exploratory laparotomy is postponed in a case in which perforation of the viscus is suspected and free air is not demonstrated, it might be well to repeat the roentgenologic examination. Winham¹⁷ recently reported a further case in point, that of a patient with a peptic ulcer which perforated following fluoroscopic examination. Fifteen minutes after the onset of acute pain a film made with the patient upright showed no evidence of air beneath the diaphragm, but three hours later a film made with the patient in the same position showed a large quantity of intraperitoneal air.

Little is said in the literature with regard to correlation of the size of the perforation with roentgenologic findings. Johnson,⁶ in reporting upon 42 cases, mentioned the size of the opening in only 12 of the 35 cases in which intraperitoneal air was demonstrated (the range was from 2 to 15 mm. and the average was 6.5 mm.) and in only two of the cases in which pneumoperitoneum was not observed roentgenographically. Kornblum⁷ said that he was unable to draw any conclusion concerning this problem. The data in Table 4 would seem to indicate that there is no constant relationship between the size of the perforation and the roentgenologic findings. For example, free air was demonstrated in 78 per cent of the 45 cases in which the gastric perforation was between 2 and 3 mm. in diameter, and in 80 per cent of the 41 cases in which the opening was 10 mm. or more in diameter. The corresponding proportions for duodenal perforation were 76 per cent and 87 per cent.

It might be conjectured that the incidence of pneumoperitoneum would be higher in cases in which perforation occurred through the anterior aspect of the stomach or duodenum than in those in

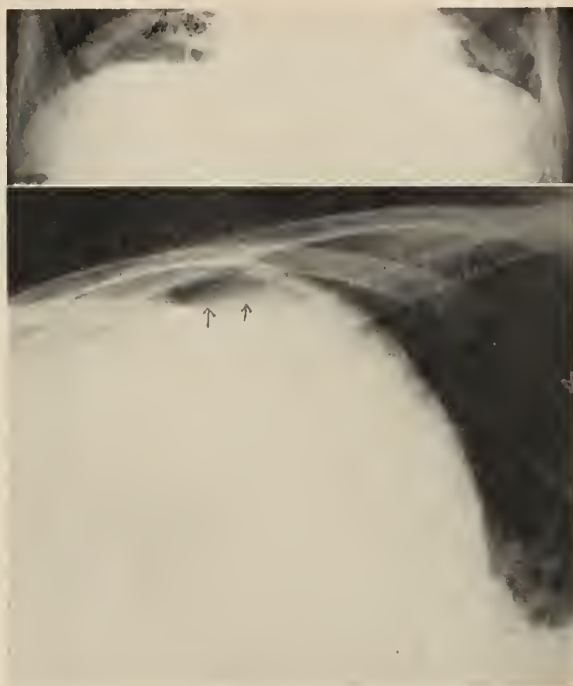


Figure 1.—*Above*, upright. *Below*, lateral decubitus. The patient had a 4 mm. anterior duodenal perforation. These roentgenograms were taken three hours after the acute onset of severe abdominal pain. In the upright film there is no evidence of gas under the diaphragm. Note gas between the abdominal wall and the liver in the decubitus film.

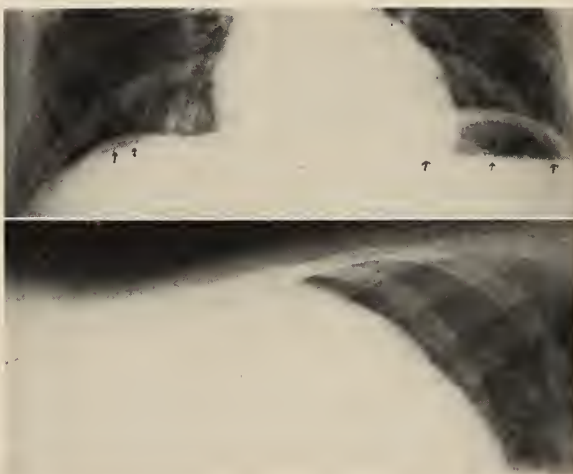


Figure 2.—*Above*, upright. *Below*, lateral decubitus. The patient had a 3 mm. anterior duodenal perforation and was examined roentgenologically five hours after the onset of acute abdominal pain. Note air under both leaves of the diaphragm in the upright view. In the lateral decubitus position there is no evidence of air between the liver and the abdominal wall.

which perforation was at a posterior site. Further, since the area immediately around a posterior perforation of the duodenum tends to become adherent to the adjacent viscera, the incidence of pneumoperitoneum in such cases should be, theoretically, even

less than in cases of posterior perforations of the stomach. The first conjecture appears to be supported by the data in Table 5: intraperitoneal gas was demonstrated in 82 per cent of cases of anterior gastric perforation, against 55 per cent in cases of posterior perforation. Contrary, however, to the second conjecture was the fact that pneumoperitoneum was demonstrated as infrequently in posterior gastric perforation as in posterior duodenal perforation.

From the technical aspect there appears to be no agreement among radiologists as to whether examination of the patient in the upright or in the decubitus position is the more dependable. Payne and Rigler⁹ stated, "If pneumoperitoneum is observed at all on the x-ray film, it will be seen between the right dome of the diaphragm and the liver in 90 per cent of the cases." Johnson⁶ felt that the upright position was "essential" for the demonstration of free air. Vaughan and Singer¹⁵ and Finsterbusch and Gross³ advocated the lateral decubitus position. Williams and Hartzell¹⁶ concluded that "the left lateral decubitus position is the position of choice." In 254 cases in the present series, films were made with the patient in both the upright and the left lateral decubitus position (Table 6). Which view was taken first is not known (theoretically it might make a difference). There was complete agreement between the studies in the two positions in 240 cases (94 per cent) and in 14 cases intraperitoneal gas was noted in one view but not the other. In the cases of disagreement, pneumoperitoneum was shown by the upright view in seven instances and by the decubitus view in seven (see figures 1 and 2). These data indicate no greater accuracy by one view than by the other, but there are other factors to be considered. Undoubtedly it is easier for a patient with acute pain in the abdomen to turn on his side than to sit erect. Also, the lateral decubitus position may facilitate the escape of intraluminal gas if there is considerable fluid in the stomach. Provided the physical condition of the patient permits, it would seem wise to take films in both positions.

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Pyloroplasty for Gastric Drainage with Vagotomy

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IT IS WELL KNOWN that vagotomy alone without a gastroenterostomy or pyloroplasty has resulted too frequently in prolonged gastric retention. Often an additional surgical procedure is necessary to establish gastric drainage.

Gastroenterostomy provides excellent drainage but it has some definite drawbacks. In 1905 Cannon and Blake¹ weighed pyloroplasty against gastroenterostomy for pyloric obstruction and concluded that pyloroplasty was preferable for the following reasons: (1) Food is pressed out of the stomach normally by peristalsis; (2) no circulation of food is possible after it leaves the stomach (a vicious circle is not possible); (3) no kinks and sharp turns in the bowel are created; (4) there is no fixation of a free loop of intestine; (5) foods are mixed in a normal manner with the digestive fluids poured into the duodenum. These same factors apply today, and to them can be added these advantages of pyloroplasty or disadvantages of gastroenterostomy: (1) Pyloroplasty permits direct examination of the ulcer crater in the duodenum. (2) Gastritis frequently occurs at the site of the gastroenterostomy. (3) With gastroenterostomy, too rapid "dumping" may occur. (4) If vagotomy is not complete a jejunal ulcer may form at the point of anastomosis. (5) Gastroenterostomy makes gastrectomy more difficult if resection becomes necessary later. (6) Sometimes after gastroenterostomy a large, boggy, dilated, thick-walled loop of jejunum forms just distal to the site of anastomosis. (7) Pyloroplasty requires less operating time than gastroenterostomy. (8) A rare complication following gastroenterostomy is herniation of the jejunum into the stomach through the stoma.

Probably most surgeons would agree that if pyloroplasty would suffice as a drainage procedure with vagotomy, it would be preferable to a gastroenterostomy, especially in younger patients. The question is, does pyloroplasty really give satisfactory drainage? In an attempt to answer this question, 50 cases in which pyloroplasty was done in connection with vagotomy were analyzed. Nine of the patients were between 20 and 30 years of age, 17 in the fourth decade of life, six in the fifth, 12 in the sixth, five in the seventh and one in the eighth. The primary reasons for operation and the number of operations done for each reason were as follows:

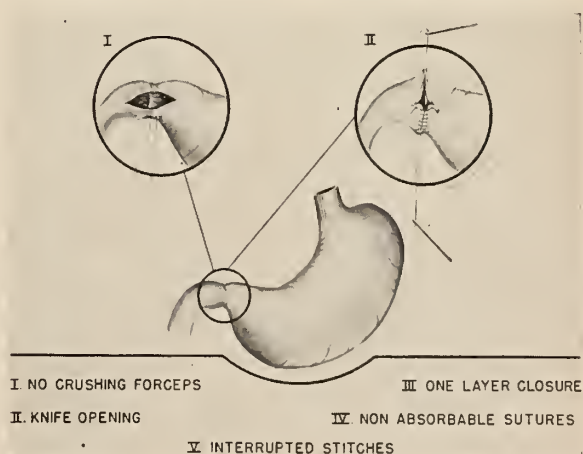
• *Heineke-Mikulicz pyloroplasty for gastric drainage in connection with vagotomy was carried out in 50 cases.*

Postoperatively a nasogastric tube with suction was used for 72 hours. The diet then was increased very slowly from liquid to bland, over a period of several weeks. If symptoms suggestive of retention developed, the oral intake was sharply decreased and if no relief was noted the tube was reinserted for 24 to 48 hours.

Of the 50 patients, 46 had no retention symptoms after operation. Of the four who had, one required gastroenterostomy but was later found to have carcinoma of the pancreas with ulceration into the duodenum. The remaining three responded to conservative measures.

Intractable pain not relieved by medical treatment, 18; hemorrhage, 16; pyloric obstruction, 10; multiple perforations, 4; diagnosis of a prepyloric ulcer preoperatively (which proved at operation to be duodenal), 2. Thus it is possible to perform pyloroplasty in any case of duodenal ulcer for which surgical treatment is necessary or desirable. (If at operation the pylorus is found to contain so much scar that it is not suitable for pyloroplasty, posterior gastroenterostomy low in the stomach can be done.) During the same period in which vagotomy-pyloroplasty was done in the 50 cases reviewed, vagotomy-gastroenterostomy was done in seven cases. At present the ratio is only about two or three to 50.

The author follows the Heineke-Mikulicz principle, described in 1888, for pyloroplasty. Features of



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the author's technique are shown in the accompanying illustration.

POSTOPERATIVE CARE

The patient is ambulated either the day of operation or on the first postoperative day. Nasogastric suction is used routinely for three full days after operation, the patient being maintained by intravenous feedings. After removal of the tube, the patient is permitted to have clear liquids in small quantities for two days and then a full liquid diet. At the end of the first postoperative week small quantities of soft foods are permitted if the patient has had no difficulty or feeling of fullness with the liquid diet. A soft diet is continued after the patient is discharged from the hospital and at the end of a month after operation a wider selection of bland foods is permitted.

If at any time a feeling of fullness or epigastric distress develops, the quantity of intake is reduced. It is important that the patient not overload the stomach; small, frequent feedings are in order for several weeks after operation.

POSTOPERATIVE BARIUM STUDIES

Gastrointestinal x-ray studies after a barium meal were made in all cases approximately one week and one month postoperatively. In many instances a third gastrointestinal series was made in the fourth to sixth postoperative month. Barium leaves the stomach more slowly after pyloroplasty than after gastroenterostomy. This is particularly true in the early weeks after operation. This slowing of emptying time is usually asymptomatic and in most cases returns to normal within four to six months.

RESULTS

Four of the 50 patients in the series had symptoms of retention postoperatively after removal of the nasogastric tube.

CASE 1. A man 24 years of age had vagotomy-pyloroplasty because of three previous perforations of a duodenal ulcer. Postoperatively the patient had headache and backache, and he vomited before meals. One week after operation, x-ray revealed 50 per cent gastric retention after six hours. After the tenth postoperative day the vomiting stopped and there

were no further symptoms of retention. Six months postoperatively x-ray study revealed 15 per cent retention after two hours and the stomach was empty in four hours.

CASE 2. A 27-year-old man was operated upon because of obstruction in the second part of the duodenum. Upon duodenotomy a large ulcer adjacent to the ampulla of Vater was observed. It was also noted at operation that the head of the pancreas was very firm. Vagotomy-pyloroplasty was performed in the hope that healing of the ulcer would eliminate the obstruction in the duodenum at the site of the ulcer. Postoperatively the patient continued to have gastric retention owing to obstruction in the duodenum. Gastroenterostomy was carried out during the fifth week after the first operation. The pylorus was observed to be patent. The obstruction was still at the ulcer site. The patient died several months later and at autopsy a pancreatic carcinoma with ulceration extending into the second part of the duodenum was observed. Because of the location of the ulcer and obstruction beyond the limits of pyloroplasty, gastroenterostomy would have been preferable in this case at the time of the vagotomy even though the diagnosis of peptic ulcer had been correct.

CASE 3. The patient, a man 26 years of age, had symptoms of retention on the fifth postoperative day. The nasogastric tube was reinserted and 2,000 cc. of fluid was removed. The tube was left in for an additional four-day period. When discharged on the 14th postoperative day the patient was eating soft foods and had no symptoms of retention. X-ray studies were made one month postoperatively and the gastric emptying time was normal. There was only a trace of barium in the stomach on the second, fourth and sixth hour films.

CASE 4. The patient was a man 46 years of age. The nasogastric tube was removed on the second postoperative day (one day early). The patient had a feeling of fullness after eating on the fourth postoperative day and it was determined that the oral intake had been increased much too rapidly. Reinsertion of the tube was not necessary. In roentgen studies one week after operation, 50 per cent retention at the end of two hours and 30 per cent retention after six hours was noted. One month postoperatively there was 50 per cent retention in two hours and 10 per cent retention in six hours. The patient had no symptoms of retention, however, after the ninth postoperative day, when he left the hospital.

There were no symptoms of retention in the remaining 46 patients after removal of the nasogastric tube on the third day after operation.

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CASE REPORTS

- March (Exertion) Hemoglobinuria
- Combined Hormone Therapy of Pemphigus Vulgaris
- Secondary Hypersplenism with Recurrent Gastro-intestinal Bleeding
- Accessory Lobes of the Liver

March (Exertion) Hemoglobinuria

Report of Two Cases

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MARCH HEMOGLOBINURIA, a clinical condition characterized by dark brown pigmentation of the urine after strenuous marching or running, was first described by Fleisher in 1881. It occurs predominantly in men between the ages of 16 and 35 years^{2,3} and is entirely a separate entity from paroxysmal hemoglobinuria, in which syphilis is reported to be the causative factor.

In all reported cases except one, march hemoglobinuria was caused by exertion with the patient in an upright although not necessarily lordotic position. The exception was reported by Witts⁷ who observed a patient in whom hemoglobinuria could be evoked by exercise on a bicycle ergometer and by running with the back acutely flexed.

The dark brown pigmentation usually is noted at the first but occasionally not until the second passage of urine following exercise, and the urine is of normal color between episodes. Many patients are completely comfortable during as well as between episodes. The syndrome is usually reported as spontaneously disappearing in from six months to two years.

No tenable theory of etiologic delineation has been evolved. Many investigators have expressed belief that the episodes of urinary pigmentation are preceded or accompanied by a rise in the content of hemoglobin in the plasma, which in turn results in hemoglobinuria. Palmer and Mitchell⁸ offered a different concept: that hemoglobin which is normally and continuously discharged into the plasma by senile erythrocytes does not clear from the plasma at the time of the exercise, with the result that the plasma becomes surcharged with the substance. The majority opinion, however, is that behind the cause is either a hemolytic process (although circulating hemolysin has not been demonstrated) or a release of hemoglobin from erythrocytes owing to some change in the cell membrane that permits permeation.

In two cases observed by the authors the syndrome was precipitated not by marching or running but by violent jumping up and down. For this reason it is felt that the term *exertion hemoglobinuria* used by Lowbury and Blakely⁴ more accurately describes the syndrome. The precipitating factor in all cases reported is exertion, differing only in kind—marching in some cases, walking or running in others and, as herein reported, jumping up and down.

CASE REPORTS

CASE 1. A 28-year-old man was first observed in January 1950 with complaint of occasional passage of brown urine. He related that for the preceding year immediately after leaving church services he passed brown urine. On succeeding days the urine would be clear and would remain so until the next attendance at church. The patient said that a part of the church ceremony consisted of shouting, handclapping and jumping up and down. There were no associated symptoms such as fever, chills or pain in the back. Upon physical examination the only abnormality noted was moderate tenderness of the prostate, which was not enlarged. The posture was normal.

Upon request, on the following Monday the patient submitted two specimens of urine, one collected soon after he left church and the other the next morning. The first specimen was reddish brown in color and the reaction to a test for albumin was 4 plus. Otherwise no abnormalities were noted on simple analysis. The second specimen was clear, normal in color and contained no albumin.

Further study of the urine to determine the pigmenting element and of the blood for possibly related information was contemplated, but the patient did not return until a year and a half later. With him was a friend who complained of severe pain in the back. In interview it was elicited that the friend attended the same church as the former patient and that he also passed brown urine after church services. Studies of both patients were then carried out concurrently (Table 1).

CASE 2. The patient, a 27-year-old man with complaint of excruciating pain in the back, said that for some five years he had had almost continuous pain, described as a drawing sensation, which was relieved somewhat by hyperextension of the back. About four years previously he had noted the passage of brown urine after he had played baseball rather strenuously. He had not noted the phenomenon again until he joined the previously mentioned church in 1949, but from then on the urine passed after attendance at church was brown.

Upon examination it was observed that the lower portion of the spine was acutely flexed anteriorly, owing to muscle spasm and pain. Several days later no pathologic condition of the back was observed upon examination. The range of motion was normal in all directions and there was no evidence of costovertebral tenderness in the lumbar region. The prostate was enlarged and moderately tender, and the left epididymis was enlarged but not tender. No abnormality was noted in an intravenous pyelogram.

Both patients were asked to submit specimens of urine

TABLE 1.—Data on Studies of Urine and Blood After Exertion in Two Cases of Exertion Hemoglobinuria

Urine:	Case 1	Case 2
Color.....	Dark brown	Dark brown
Specific gravity.....	1.019	1.022
Sugar.....	None	None
Albumin.....	3 plus	4 plus
Sediment.....	Few fine granular hyaline casts	Numerous granular hyaline casts
Pus cells.....	2 to 4 HPF	Occasional
Erythrocytes.....	None	Occasional
Methemoglobin.....	Present	Present
Oxyhemoglobin.....	Present	Present
Blood:		
Erythrocytes.....	5,100,000 per cu. mm.	4,740,000 per cu. mm.
Hemoglobin.....	14.5 grams per 100 cc.	13.1 grams per 100 cc.
Leukocytes.....	6,550 per cu. mm.	9,900 per cu. mm.
Distribution of leukocytes.....	Normal	Normal
Kolmer test result.....	Negative	Negative
Donath-Landsteiner reaction.....	Negative	Negative
Erythrocyte fragility.....	Normal	Normal
Sedimentation rate (Cutter).....	9 mm. in 60 minutes	8 mm. in 60 minutes
Icteric index.....	5 units	17 units
Direct van den Bergh.....		0.3 mg. per 100 cc.
Indirect van den Bergh.....		0.9 mg. per 100 cc.

voided soon after the next church services and also to report immediately after services for withdrawal of specimens of blood. Laboratory data on the urine and the blood so obtained are given in Table 1.

The authors also attended the church to observe the patients at the services. During the singing of a hymn, continuously for eight minutes, both patients like others in the congregation became almost ineffably excited emotionally. With facial muscles taut in sardonic grin, they jumped and stamped rhythmically at ever increasing pace. The volume of voices was well-nigh deafening, the hand-clapping thunderous. The two patients, it was noted, threw their bodies into extremely lordotic position as they lifted arms and faces skyward in the classic attitude of supplication. Later another hymn, twice as long as the first and no less acrobatically fervid, was sung. It ended in sheer exhaustion of the participants.

TREATMENT

Gilligan and Blumgart² reported benefit in some cases in which the following means of treatment were used: (1) Maintenance of kyphosis during exertion, (2) alkalization of the urine before exertion, and (3) administration of large doses of ascorbic acid.

Both patients here reported upon were given, at first, 500 mg. of ascorbic acid daily. After a week, the patient in Case 1 had no episodes of unusual urinary pigmentation. Therapy was discontinued at the end of a month, and passage of brown urine then recurred. Administration of ascorbic acid was resumed but at a dosage of 100 mg. daily, and there were no further episodes. The patient in Case 2 continued to have attacks even after a month of administration of 500 mg. of ascorbic acid daily. A starch-free "hyperacidity diet" and sodium bicarbonate tablets were then prescribed. When the episodes still did not abate, the patient was given 600,000 units of penicillin in oil intramuscularly every other day for two weeks. In the first week, although the patient attended church twice in that period, the color of the urine was normal. During the second week the episodes recurred and penicillin therapy thereafter seemed to have no effect.

Treatment must be empirical until more is learned about the basic cause of exertion hemoglobinuria. In this connection the authors' attention has been recently focused on the discoveries with regard to sickle cell anemia made by electrophoresis.⁶ It is hoped that when Tiselius electrophoresis apparatus becomes available, similar studies can be made

to determine if there is any departure from the normal in the hemoglobin of the two patients here reported upon.

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Combined Hormone Therapy of Pemphigus Vulgaris

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THE EMPLOYMENT of corticotropin (ACTH) or cortisone in the treatment of pemphigus vulgaris represents one of the major advances in the management of that disease. The use of these hormones has kept alive patients who heretofore undoubtedly would have died. The various investigators throughout the world who have reported successful treatment of patients moribund with pemphigus have been justifiably cautious not to claim any cures. The vast majority of patients with pemphigus vulgaris die within the first year of illness, yet some carry on with remissions and exacerbations for three years or longer, a variability that confounds evaluation of any therapy so far as cure is concerned. To indicate the improvement in prognosis with corticotropin and cortisone yet not imply that the hormones are curative, Sulzberger and Baer⁶ coined the word *morbiditystatic*.

In addition to other benefits, hormone therapy reduces the nursing load and greatly shortens the period of hospitalization. Many patients have been restored to productive lives by maintenance doses of corticotropin or cortisone. In some cases the disease has been controlled for many months, and there are reports of a few patients now in the second year of successful management.

In the following case, both corticotropin and cortisone were necessary for control of the disease.

REPORT OF A CASE

A 70-year-old white man with pemphigus vulgaris that had steadily increased in severity since onset some three months previously was observed by one of the authors in consultation late in March 1951. There were numerous intact and eroded bullae on the trunk, abdomen, buttocks, flexural surfaces of the elbows, on the sides of the neck, in the axillae and inside the mouth.

Naphuride chloride and large amounts of vitamin D had been given by mouth, without effect, and the bullous lesions on the trunk and extremities were being treated with potassium permanganate baths and a dusting powder. Cortisone

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was recommended, and on March 31, 300 mg. was given by mouth in a 24-hour period, then 200 mg. the next day and 100 mg. the next. Little improvement was noted and as the patient could not be adequately cared for at home he was hospitalized April 6.

The blood pressure was 130 mm. of mercury systolic and 80 mm. diastolic. The pulse rate was 60. Three plus pitting edema of the wrists, hands, ankles and feet was noted.

Erythrocytes numbered 4,900,000 per cu. mm. of blood and the hemoglobin content was 15.5 gm. per 100 cc. Leukocytes numbered 15,100 per cu. mm.—77 per cent polymorphonuclear cells, 19 per cent lymphocytes and 4 per cent monocytes. Eosinophils numbered 181 per cu. mm. Thirty milligrams of corticotropin was given intramuscularly and four hours later the number of eosinophils was 154 per cu. mm. of blood. (The cells in all the squares in a standard leukocyte counting chamber were counted and the total number was multiplied by a factor of 11.1 as per the method of Randolph.)

Cortisone having been discontinued, the patient was given 20 mg. of corticotropin intramuscularly every six hours. As adjuvant therapy 500 mg. of terramycin was given by mouth every six hours, and bacitracin ointment and potassium permanganate soaks were used to treat the lesions.

At first the patient was completely bedridden and could take only liquids by mouth.

On April 20 the total protein content of the blood was 5.8 gm. per 100 cc. and the ratio of albumin to globulin was 1.3:1. On May 4 the total was 5.5 gm. and the ratio 1.1:1.

By May 24 the bullae had healed and fewer new lesions appeared. The patient then was eating a 2,500 calory diet without difficulty. The amount of corticotropin administered had been gradually reduced to a total of 45 mg. a day and on May 25 use of the hormone was discontinued.

Bullae began to recur and intramuscular administration of corticotropin was resumed May 28 on a schedule of 15 mg. every eight hours. The bullae again cleared and on June 6, with the lesions in complete remission, the patient was discharged from the hospital with prescription of 8 mg. of corticotropin to be given intramuscularly every eight hours, 1 gm. of potassium citrate three times a day and a diet high in carbohydrates, protein and vitamins.

Two weeks later bullae recurred on both forearms and the right knee. The patient was readmitted July 3. He was given 30 mg. of corticotropin intramuscularly every eight hours and 33.0 mg. of desiccated thyroid twice a day. Topical treatment consisted of boric acid ointment and potassium permanganate soaks. By July 11 the bullae were completely cleared but new lesions appeared on the arms two days later. The dosage of corticotropin was increased to 30 mg. every six hours and again the bullae cleared. Moderate edema of the feet developed but the blood pressure remained about 110 mm. of mercury systolic and 70 mm. diastolic during the entire stay. The patient was discharged July 19 with prescription of 30 mg. of corticotropin to be given intramuscularly every six hours and potassium permanganate soaks.

He gradually became worse and was readmitted August 4. The intake of salt was restricted. Corticotropin was administered intramuscularly, 30 mg. every six hours. In addition 65.0 mg. of desiccated thyroid a day and 500 mg. of terramycin by mouth every six hours were given. Bacitracin ointment was used topically. New lesions appeared over most of the surface of the body. The patient complained of pain in all areas and had difficulty in eating owing to extreme tenderness inside the mouth. He appeared to be moribund. Morphine and Demerol® had to be given for control of pain.

On August 8 intramuscular administration of cortisone, 50 mg. every 12 hours, was begun, and in addition 10 mg. of corticotropin every six hours. Moon facies began to develop. The bullae slowly regressed and on September 3 the

patient was able to sleep without the use of morphine or Demerol. Administration of cortisone was interrupted from September 5 to September 8 owing to inability to get the hormone, and new bullae began to appear. On September 9 administration of cortisone and corticotropin was resumed on the same schedule as before.

An electrocardiogram was made October 5 and no abnormalities were noted.

To maintain positive nitrogen balance, oral administration of testosterone propionate on a schedule of 25 mg. twice a week was begun October 7.

The patient gradually improved and was discharged October 29 in good spirits and with the lesions almost completely healed. Intramuscular administration of 50 mg. of cortisone every 12 hours and 10 mg. of corticotropin every eight hours was prescribed.

One new bulla developed on the forearm November 6, and on November 8 the patient was readmitted to hospital with bullae on the forearms, thighs and back. He reported one episode of hemoptysis and complained of pain in the chest on deep inspiration. Moist rales were heard at the base of the right lung and a diagnosis of pneumonia was confirmed by an x-ray film of the chest. Mooning of the facies was present as before, but the blood pressure continued about 130 mm. of mercury systolic and 80 mm. diastolic. No pitting edema was noted.

Penicillin was given, 300,000 units every 12 hours, and bacitracin ointment was applied to the dermal lesions. No change was made in the dosage of cortisone and corticotropin. There was prompt response to treatment and the patient was discharged in complete remission November 15. In addition to the previously prescribed dosage of cortisone and corticotropin to be injected intramuscularly at home, 25.0 mg. of testosterone by mouth twice weekly was prescribed.

At the time of last observation before this report was written, in December 1952, more than a year after the last discharge from the hospital, there had been no recurrence of bullae. The dosage of both corticotropin and cortisone was gradually reduced and after mid-September 1952 the patient was receiving 20 mg. of corticotropin and 25 mg. of cortisone daily. When last determined, in May 1952, the albumin content of the blood was 4.8 gm. and the globulin 2.5 gm. per 100 cc., a ratio of 1.92:1. Moon facies continued and acneiform lesions appeared on the trunk occasionally, but edema did not develop during a period of more than a year, the body weight remained constant, the blood pressure continued within normal limits, electrocardiograms showed no abnormalities, and there was no indication of mental aberrations. Although the patient reported gastric distress from time to time, no abnormality was observed in roentgen study of the upper gastrointestinal tract. A Randolph modification of the Thorne test carried out October 23, 1952, showed 233 eosinophils per cu. mm. of blood before injection of 25 mg. of corticotropin and 187 per cu. mm. four hours after the injection. Content of sugar in the blood (fasting) was determined from time to time and was within normal limits. No abnormalities were noted in occasional urinalyses.

DISCUSSION

The authors believe that combined use of cortisone and corticotropin is superior to huge doses of either hormone for the treatment of pemphigus vulgaris. The inhibitory effect of prolonged use of cortisone on the adrenal cortex can be counteracted by the stimulating effect of corticotropin.

The patient in the present case had been taking either cortisone or corticotropin for 20 months at the time of this report—both of them in combination for 16 months—and no new lesions had appeared for more than 12 months.

He was active and in good spirits when last observed. In the 20 months of almost continuous hormone therapy, during which the patient received a total of 29,475 gm. of cortisone and 18,131 gm. of corticotropin, no serious side effects or untoward reaction developed.

SUMMARY

A 70-year-old man with pemphigus vulgaris so severe at one time that he was moribund returned to an asymptomatic state under continuous therapy with corticotropin and cortisone in combination. At the time the patient was last observed, after 20 months of treatment, he had had no bullae in 12 months.

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Secondary Hypersplenism With Recurrent Gastrointestinal Bleeding

MORRIS BERK, M.D., Oakland

ESSENTIAL, or idiopathic, hyperlipemia is rare. Movitt⁵ and co-workers in a recent review of the literature found reports of only 14 cases. They reported three cases they had observed. Hypersplenism secondary to this unusual metabolic disturbance has not been reported as such, although splenomegaly and hemorrhagic tendencies are mentioned. The following case is that of a patient with essential hyperlipemia and secondary hypersplenism. Splenectomy apparently cured the hypersplenism. Clinically, the hypersplenic state was manifested by repeated severe gastrointestinal hemorrhages over a period of several years associated with thrombocytopenia, prolonged bleeding time and deficient clot retraction. Bleeding probably occurred from a chronic duodenal ulcer. The case had been reported¹ previously as one of essential hyperlipemia with studies only up until May 1950, a year before splenectomy was carried out. The repeated bleeding had been ascribed as secondary to the metabolic disorder but without an explanation of its mechanism or consideration of the possibility of hypersplenism.

CASE REPORT

A 34-year-old white farm laborer gave a history of intermittent episodes of cramp-like pain in the left upper quadrant of the abdomen from the age of eight years. He also

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noted delayed healing of superficial skin wounds. In an examination of the blood when the patient was 25 years of age the erythrocyte content was reported as 2.6 million per cu. mm. and the hemoglobin value 57 per cent. Occult blood was present in the stool and the cholesterol content of the blood was elevated. It was noted that the serum was milky in appearance. No abnormality was noted in examination of aspirated bone marrow. Because of the abnormalities mentioned the patient was discharged from military service in 1943.

He remained in fair health except for frequent weak spells until the fall of 1947, when he was hospitalized elsewhere for severe weakness. At that time rather pronounced pallor, a systolic murmur, and hepatosplenomegaly were noted. Erythrocytes numbered 1.38 million per cu. mm. of blood, and thrombocytes 140,000. Bleeding and coagulation times were within normal limits. The number of leukocytes varied from 3,250 to 5,800 per cu. mm. with a normal differential. The content of serum proteins was 5.9 gm. per 100 cc., with 4.6 gm. of albumin and 1.3 gm. of globulin. Cholesterol content was 154 mg. per 100 cc. Liver function tests gave normal results. Occult blood in the stools was noted on several occasions. No abnormalities were observed in the first two of four roentgen series of the gastrointestinal tract; the third showed a probable duodenal ulcer and the fourth a definite duodenal ulcer with a crater. Esophagoscopy was carried out and a tendency to bleed with minimal trauma at the cardio-esophageal junction was noted, but no definite varices were observed. Bone marrow examination disclosed mild erythroblastic hyperplasia.

In December 1947 the patient had burning pain in the left upper quadrant of the abdomen, felt extremely weak and was again hospitalized. He was noted to be severely anemic and there was occult blood in the stools. A number of blood transfusions were given. A few months later a duodenal ulcer was again demonstrated by roentgen examination. Following discharge from the hospital the patient continued to have frequent periods of weakness, accompanied by melena.

The patient was admitted to the Veterans Administration Hospital, Oakland, in June 1949 for pension evaluation purposes. He was at that time slightly pallid. The spleen descended two fingers-breadth below the costal margin on deep inspiration. There was no enlargement of lymph nodes. Erythrocytes numbered 4.35 million per cu. mm. of blood and the hemoglobin content was 12 gm. per 100 cc. Leukocytes numbered 3,850 per cu. mm. with normal differential of cells. The thrombocyte content was 110,000 per cu. mm. Bleeding time, coagulation time, prothrombin time and erythrocyte fragility were normal. In roentgen examination of the gastrointestinal tract, indication of ulcer on the lesser curvature of the duodenum was noted. The blood serum was creamy white. The total content of lipids per 100 cc. of serum was 1,375 mg.; of phospholipids, 629 mg.; of cholesterol, 374 mg. The patient was discharged in July 1949.

Upon returning home the patient found that his activities were limited by weakness and dizziness. Melena appeared at approximately monthly intervals, lasting at least two or three days. In March 1950 he was readmitted owing to increasing weakness, hematemesis and melena. The patient weighed 140 pounds. Pallor of the skin and mucous membranes was noted. The blood pressure was 138 mm. of mercury systolic and 70 mm. diastolic; the pulse rate was 120. The spleen was palpable one finger-breadth below the costal margin on deep inspiration and the edge of the liver at the right costal margin. Erythrocytes numbered 1.87 million per cu. mm. of blood and the hemoglobin content was 5.85 gm. per 100 cc. Leukocytes numbered 6,900 per cu. mm.—

84 per cent polymorphonuclear cells and 14 per cent lymphocytes. The blood serum was creamy in appearance and the total lipid content was 3,300 mg., phospholipids 500 mg. and cholesterol 197 mg. per 100 cc. A sulfobromophthalein test revealed no retention of the dye in 45 minutes. The reaction to a cephalin cholesterol flocculation test was plus minus in 48 hours. Thymol turbidity was 3 units. Serum amylase activity was 60 units. Basal metabolic rates were plus 2 and minus 8. Sternal marrow biopsy showed hyperplasia of the erythropoietic series and the presence of fat storage cells. A gastrointestinal series revealed a deformed duodenal cap with pronounced irritability but without a definite flock. There was no evidence of varices in the esophagus.

A strict Sippy regimen was prescribed and the patient was given 18 blood transfusions in a period of one month. For the first seven days the stools were tarry, then gradually they became normal in appearance, but most specimens contained occult blood. At the time the patient was discharged from the hospital in April 1950 the erythrocyte and hemoglobin content of the blood was normal.

After leaving the hospital the patient followed a modified Sippy diet and had no symptoms referable to the gastrointestinal tract except for intermittent melena occurring every four to six weeks and lasting for at least several days. He was again admitted to hospital in January 1951. During the three preceding weeks he had noted tarry stools more frequently, and eventually pronounced weakness and dizziness developed. The patient said he had had no bleeding from any other site. There was no family history of blood dyscrasia.

The patient was pale and appeared to be slightly undernourished. The blood pressure was 140 mm. of mercury systolic and 70 mm. diastolic, and the pulse rate was 120. Again the spleen was palpable on deep inspiration. A tarry material was noted on the finger used in rectal palpation. Erythrocytes numbered 1.6 million per cu. mm. of blood and the hemoglobin content was 5.9 gm. per 100 cc. Leukocytes numbered 3,500—69 per cent polymorphonuclear cells, 29 per cent lymphocytes and 2 per cent eosinophils. There were 60,000 thrombocytes per cu. mm. Serum bilirubin content was 0.1 mg. per 100 cc. Prothrombin time was 93 per cent of normal. The reaction to a cephalin cholesterol flocculation test was negative in 24 hours and 1 plus in 48 hours. The result of a Congo Red test was negative. In a second examination thrombocytes numbered 36,000 per cu. mm., and 4.2 per cent of erythrocytes were reticulocytes. A gastrointestinal series again showed a spastic and irritable duodenal bulb. The esophagus and stomach were normal. Moderate enlargement of the spleen caused a pressure defect on the greater curvature aspect of the stomach.

Multiple blood transfusions were given. Tarry stools were passed at frequent intervals. After the patient had been in the hospital six weeks a severe episode of hematemesis, melena, and shock-like manifestation occurred. Studies during the severe hemorrhage showed a definite thrombocytopenia and prolonged bleeding time. Clotting time (Ivy) was 6 minutes (normal 5 to 12 minutes). Bleeding time (venous) was 7½ minutes (normal 1 to 6½ minutes). Clot retraction (Aggeler and Lucia¹) showed a total fluid volume of 31 per cent (normal 0 to 20 per cent). Additional hematologic data were reported as follows: "Sternal marrow smears showed moderate hyperactivity. A fair number of fat-laden macrophages were present. The number of megakaryocytes and naked megakaryocyte nuclei on smears of the marrow appeared to be moderately increased. The granulation in the cytoplasm appeared normal but only a very few appeared to be forming platelets. Very few platelets were seen on the bone marrow smears. There was a definite increase in the proportion of erythroid cells and a slight tendency to left

shift in both the erythroid and the myeloid series." The thrombocyte content of the blood, repeatedly determined, varied from 83,000 to 216,000 per cu. mm. but was below 200,000 in most instances. (The lower limit of normal by the method utilized was 200,000 per cubic mm.)

Splenectomy was advised. The patient continued to have frequent tarry stools up until the time of laparotomy on April 2, 1951. Upon exploration extensive adhesions were observed throughout the upper peritoneal cavity, involving all the structures in this region. The spleen was completely embedded in a mass of adhesions which were quite dense and divided with considerable difficulty. Splenectomy was, however, eventually accomplished. The liver, stomach and transverse colon were densely adherent to the parietal peritoneum, interfering with observation and palpation of these organs. Because of the difficulty encountered, an attempt to locate the site of bleeding was abandoned, as was the possibility of partial gastrectomy with excision of the ulcer.

On the first postoperative day erythrocytes numbered 5.2 million per cu. mm. of blood and the hemoglobin content was 14.4 gm. per 100 cc. Thrombocytes numbered 280,000 per cu. mm. The stools immediately became and remained negative for occult blood. The patient was discharged ten days after making uneventful recovery from the splenectomy.

PATHOLOGIST'S REPORT

Pathologist's report: The spleen weighed 570 gm. On cross section the parenchyma was observed to be purple, firm, and without fatty areas. The major vessels were intact. Microscopic sections showed no endothelial proliferation and there were no changes in the vascular walls of the vessels. Malpighian corpuscles were of normal size, many containing small but active germinal centers. The perifollicular wall of reticulo-endothelial cells was somewhat more prominent than usual. No pseudofollicles were seen. The sinusoids were rather narrow and were either empty or contained a few erythrocytes mixed with a few leukocytes. No evidence of phagocytosis could be seen. The splenic pulp took up the major part of the section owing to pronounced hyperplasia of the reticulum cells. There was no evidence of phagocytosis in the pulp and there were no cells suggesting storage of lipid material. Corresponding ion stains did not show any free ion to be present. Diagnosis: Reticulum cell hyperplasia of the spleen, compatible with hypersplenism.

The patient was again admitted to the hospital in February 1952 for follow-up examination. He said that he felt considerably better and had noted no melena or other symptom referable to the gastrointestinal tract. He was not pallid. The liver was palpable one to two finger-breadths below the right costal margin. Gastrointestinal roentgen studies again showed deformity of the duodenal bulb without a crater. Two stools were negative for occult blood. Erythrocytes numbered 4.5 million per cu. mm. of blood and the hemoglobin content was 16.8 gm. per 100 cc. There were 178,000 platelets per cu. mm. (normal 150,000 to 350,000). Bleeding time was only two minutes and clot retraction was normal. The patient was discharged a few days later.

COMMENT

It appears that in the case here reported the diagnostic requirements of hypersplenism were fulfilled—hyperactivity of bone marrow, splenomegaly and depletion of peripheral blood.² The presence of abnormal appearing megakaryocytes in the marrow, with inhibited production of platelets, and the absence of phagocytosis in the spleen favor the inhibitory or humoral mechanism of hypersplenic activity. Such splenic influence in the present case seemed to be "selective,"³ involving chiefly the platelet-forming elements. The

rather close relationship of gastrointestinal bleeding with thrombocytopenia and prolonged bleeding time was further evidence that the hemorrhagic manifestation was due to a factor other than, and in addition to, a single ulcerative lesion of the mucous membrane. The splenic influence was conclusively proven by the abrupt disappearance and continued absence of melena, both gross and by occult test, immediately after splenectomy. In addition the blood picture was normal and tests that would indicate hemorrhagic disturbance if it were present were negative for a year follow-up. Although purpura was not present, that does not rule out the thrombopenic state,⁴ for it may be manifest by local bleeding from mucous membranes alone. The bleeding of thrombopenia is said to respond dramatically to removal of the spleen in such cases.

Although hemorrhagic tendencies have been described in several of the reports of cases of essential hyperlipemia, and splenomegaly in most of them, apparently in no case was investigation along the lines of associated splenic hyperactivity carried out. Hematemesis, epistaxis, death from "increasing hemorrhagic diathesis," reduction in the thrombocyte content in a patient with epistaxis, and prolonged bleeding time have been mentioned. No explanation has been offered for these hematologic abnormalities. Such findings should arouse suspicion of concomitant hypersplenism, since splenectomy may be life-saving.

Secondary hypersplenism is said to produce a clinical picture identical with that of primary hypersplenism, but to occur as a complication of a number of chronic disease processes such as leukemia, Hodgkin's disease, Boeck's sarcoid, "Banti's disease," Gaucher's disease and various infectious diseases such as tuberculosis, malaria, and kala-azar.⁶ Apparently no case of hypersplenism secondary to essential hyperlipemia has been reported to date.

SUMMARY

A case of hypersplenism, secondary to essential hyperlipemia and cured by splenectomy, is presented. No other case of hypersplenism secondary to this metabolic disorder has been reported in the literature.

The abnormal splenic influence involved only platelet-forming elements with production of thrombocytopenia and repeated gastrointestinal bleeding. It is probable that the site of bleeding was a duodenal ulcer.

Splenectomy in hypersplenism secondary to benign primary disease, such as essential hyperlipemia, may be life-saving.

Hematologic abnormalities, associated with hemorrhagic tendencies and splenomegaly, are reported in the majority of cases of essential hyperlipemia. In some cases the patients may have secondary hypersplenism.

13th and Harrison Streets.

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Accessory Lobes of the Liver

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THE DIAGNOSIS of any intra-abdominal tumor is always of general interest and stimulates much speculation. Were it possible accurately to determine the exact nature of such tumors by means of physical diagnosis and roentgenography alone many operations could be avoided. As this obviously is not the case it is important to evaluate each tumor anatomically so as to presuppose a site of origin. Such a study not only enables the surgeon to plan a more effective operation but helps the internist in arriving at a diagnosis.

Despite its complex development the liver is subject to few abnormalities, and tumors palpated in the right upper quadrant of the abdomen are rarely attributed to other sites of origin. When accessory lobes of the liver occur they are rare, small, on the undersurface, and usually without clinical significance.

The human liver consists essentially of three main lobes but is unlike the liver of the pig or that of the dog, which are divided into distinct lobules separated by connective tissue.^{2,4,6} The three fundamental lobes of the human liver develop independently in connection with different embryonic veins. Bradley¹ stated that the central lobe with its right and left lobules develops about the umbilical veins and the right and left lobes along the corresponding omphalomesenteric veins. The cause of fissures in the human liver is not clear; there is a possibility that they may be preceded by mesodermic septa which separate the lobes at an early period.

Both Fraser³ and Cullen² reported accessory lobes arising in numerous places—from the gallbladder, in the suspensory ligament, imbedded in the adrenal gland, in the gastrohepatic ligament and in the pleural cavity. Cullen cited one case in which an accessory lobe became twisted on its pedicle and made emergency operation necessary.

The case report appearing below describes an abnormality which was not a true accessory lobe but rather an elongation of the right lobe of the liver. Despite thorough clinical and roentgenographic studies the findings were confused and the abnormality was thought to be a tumor separate from the liver.

Jacquemet⁵ pointed out that the right lobe of the liver may extend into the iliac fossa. This malformation is totally independent of all alterations of the liver and appears to be congenital. It is referred to as Riedel's lobe and is confused with a variety of pathologic entities. In 1888, Riedel of Jena first described this curious anomaly in which the right lobe of the liver, without evidence of pathologic change, may extend to below the anterior iliac spine. He reported two typical cases. The literature on the subject is voluminous, but there is still much doubt and conjecture about the causes to which the condition is ascribed: tight lacing of garments, pushing down of the right lobe of the liver by an enlarging gallbladder, a dragging down of the liver substance by adhesions to the anterior abdominal wall, the drag of adherent prolapsed intestine or other abdominal viscus, and the presence of growths and cysts of various kinds.

Riedel called attention to the facts that extension of the right lobe occurs more frequently in women and that after evacuation of a distended gallbladder the lobe diminishes in size rather rapidly. Finney³ stated categorically that in some cases the condition was caused by the tight lacing of women's apparel but that the principal cause is enlargement of the gallbladder, with adhesions from preceding inflammatory conditions playing an important role. He cited one case in which the tongue of liver substance became so attenuated that it was almost separated from the main body of the liver. He believed that the anomaly was an example of "the



Figure 1.—Roentgenogram of the abdomen revealing a large mass on the right side.

pliability of the various structures of the human body and the ultimate result of mechanical action over long periods of time."

In the case reported here there was no evidence of pre-existing gallbladder disease and no intra-abdominal adhesions, and tight lacing was not a factor.

CASE REPORT

A 68-year-old white woman had mild pains in the lower right part of the abdomen, inconstant in nature and unrelated to bowel function. A large, firm mass extended from the pelvis on the right side to about the costal margin. It could not be felt on rectal or vaginal examination. The mass was smooth and was not tender; because of moderate obesity it was difficult to determine accurately whether it moved with respirations. It was ballotable from behind. No pertinent findings were obtained by thorough roentgen study (Figure 1) of the gallbladder, stomach, small and large intestine and kidneys; none of the normal viscera seemed displaced by the mass.

The impression was that of retroperitoneal tumor. On laparotomy a transverse, deep fissure was seen on the under-surface of the right lobe of the liver at about the level of the costal margin. Extending beyond the fissure was a long tongue or lappet of normal-appearing, smooth liver reaching into the iliac fossa. There was no fissure on the anterior surface. A biopsy specimen taken from the accessory lobe showed only normal liver.

SUMMARY

In the case here reported, extension of a lobe of the liver was found at operation after mild symptoms had led to a diagnosis of tumor.

450 Sutter Street

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EDITORIAL

Gamma Globulin, the Health Officer And the Family Physician

COMES SUMMER, comes poliomyelitis. And with it, this year, a dual problem of therapy and public relations for private physicians and health officers.

The protagonist this year is gamma globulin, derived from whole blood, which has been tested and found, variously, to have some effect in preventing poliomyelitis and in ameliorating the paralytic effects of the disease after it is contracted.

Perhaps gamma globulin, generally referred to as GG, should not be cast in the role of the protagonist. It is, actually, the innocent bystander in a battle of giants. In this instance, the bystander does not stand to suffer, but its two strongest friends are more likely to feel the evil effects of the play.

These friends are the health officer and the family physician. They have been cast in mere walk-on parts in the play between the Office of Defense Mobilization, the American National Red Cross and the National Foundation for Infantile Paralysis, Inc. While these titans battle and each protects its own position, the health officer and the family physician are left to shift for themselves and to absorb the public punishment which is due to be meted out.

Placing these giants in their respective positions, we find the ODM in the official top spot, in charge of the entire program of production and distribution of GG. The American National Red Cross has assumed responsibility for the collection of whole blood, from which GG may be produced. The NFIP comes into the picture as a national organization primarily interested in preventing and treating poliomyelitis and, incidentally, the owner of large supplies of gamma globulin produced before the national program was worked out.

Beneath this top level group come the health officers—the state and territorial health officers and the numerous county, district and municipal health

officers serving in smaller jurisdictions. While these specialists in communicable disease have been consulted in the national planning, their voices have been lost in the trumpeting of the giants. The family physician may be listed in the program among those “also in the cast.”

As the distribution program has been worked out, 57 per cent of that part of the apparent total national 1953 supply of GG that has been earmarked for the prevention or treatment of poliomyelitis will be allocated to the state health departments. (It is planned that California's allotment will be used for inoculation of persons in the households of patients with clinically diagnosed cases of the disease.) The remainder of the national supply will be reserved for the prevention of infectious hepatitis and measles and, to a larger extent, for mass inoculations in selected communities where it appears there will be an unusually high incidence of cases.

California will receive about 18,000 doses of GG for inoculating “household contacts.” With 10 per cent of that supply reserved for camps, state institutions and for use in areas of unusual outbreaks, we will have 16,200 prophylactic doses available for a population of more than 11,000,000 people.

The California Medical Association and the State Department of Public Health have already called the public's attention to this situation and have pointed out that many California parents who would like to have their children get GG prophylactically must be disappointed. The supply just won't meet the demand.

Meanwhile, the Red Cross has used the need for blood for GG production as a rallying cry in its annual drive for funds. The Red Cross has insisted that its call for funds has been an honest appeal and not, as others have claimed, a misrepresentation to the public. The fact remains that no matter how much whole blood is secured, the processing facilities for producing GG will not accommodate more than a small fraction of the national demand.

The National Foundation for Infantile Paralysis, Inc., has been, and still is, demanding that 80 per cent of the total supply of GG be retained for mass community inoculations in areas of high incidence. Basil O'Connor, director of the NFIP, has retreated ungracefully from that demand in view of the combined opinions of all other groups in the planning picture. He is still plumping for selective mass inoculations as a preventive measure, still trying to get 80 per cent of the total supply. Of course, these mass inoculations breed fine publicity—but where do they leave the household contacts of patients with poliomyelitis outside the selected communities, who need prophylaxis and cannot obtain it for lack of GG?

Suppose an outbreak of poliomyelitis hits a community. Suppose the incidence is double the five-year average on which the basic allocation of GG to the states is made. Suppose the same thing happens in several other California areas. Where does a local physician stand?

He will be the target of irate parents and family members who want whatever protection GG may give them, the scoundrel who cannot produce this wonderful serum that has been so widely advertised by large national quasi-medical organizations, the scientist who is withholding from the people—those who contributed their own money to help produce and distribute this serum—the very product for which they have paid.

A family physician may be able to withstand the charges leveled against him, simply because he knows his patients well enough to reason with them and to be believed by them. But a specialist or a physician less well known to the family who is called in on a case of poliomyelitis is less likely to be so well treated. And a health officer? Why, he will simply be looked upon as a bureaucrat with no heart, willing to sit by while poliomyelitis ravages the community.

That is the prospect for the next few months. Gamma globulin has been so well advertised to the public that a latent demand for it already exists. With even a minor outbreak of poliomyelitis, that demand will become bitterly vocal.

Honor Bright

NOT LONG AGO the Cancer Commission of the California Medical Association made a study of Laetrile, a substance which was being used in some quarters for the treatment of patients with cancer, and reported that it found no evidence to warrant use of the substance for that purpose. The Commission had previously made similar studies in similar circumstances and reported similar conclusions.

By and large the reasons for such studies and reports are quite as well understood outside the medical profession as within: To find out whether there is merit in the subject of investigation and, if there is, to give it the impetus it deserves; if there is not, to say so forthrightly and thus insofar as possible put an end to false hope that leads to worthless treatment and to delay in application of therapy that might be effective if begun early.

Always, however, when the report is adverse there are a vociferous few who howl that a jealous medical trust is “suppressing competition” or “intimidating research.”

To credit such charges it is necessary to believe both the unthinkable, that all members of the Cancer Commission would, if they could, prevent the use of an agent or procedure helpful in the treatment of cancer, and the impossible, that they could if they would.

The Cancer Commission is made up of honorable physicians whose thoughts are in great measure given to ways to wipe out cancer and meanwhile to improve detection, diagnosis and treatment of the disease. Wholesomely, for an investigative body, they are not always in agreement with each other as to what present methods are best or as to what direction research should take. When they investigate they seek not agreement but truth.

In a mind that gives any place at all to faith, it is inconceivable that men of such stamp would not welcome and shout abroad a cure for cancer, whether it should be found by painstaking research in a great medical center, by accident in a high-school physics class, or by mumbo jumbo with burned feathers and crushed spiders in a mud hut in Borneo. And even those few unhappy cynics who are so forlorn they can put no faith in honor as a motive, must know that to conceal a cure for cancer would be quite impossible no matter who might wish to do so. It need only be noted that when the Cancer Commission made its report on Laetrile, the public press did not swallow it whole without looking; at least some newspapers investigated and called upon the advocates of the substance to say what they would of the report. If those advocates had a case to make, they could not be kept from making it. Moreover, if Laetrile were effective against cancer, not all the statements to the contrary that could possibly be mustered would keep persons with the disease from seeking treatment with it.

As to “intimidation,” the only research that might be intimidated by reports such as those made by the Cancer Commission would be licentious experiment, upon uninformed human subjects, with methods of treatment that have not first been thoroughly tested

in animals and found to be both effective and safe. If that kind of "research" is given come-uppance, the more abruptly and the more often, the better. Real research is dedicated and passionate and cannot be intimidated or fettered or bounded save by its own discipline.

Much of the work of the Cancer Commission is of a plodding, unspectacular kind that attracts little public attention. Perhaps few outside the ranks of medicine would more than vaguely recognize what far-reaching benefits to the public are contained in the California Cancer Commission Studies, a manual distributed in 1950 to all members of the California Medical Association and to many other physicians in the interest of detection of cancer at an early stage when it may be curable by methods already available. Fewer still could know how much

yeoman's service went into the preparation and publication of that manual.

The report in the May issue of CALIFORNIA MEDICINE (page 473) evaluating the use of periodic examination of asymptomatic persons for purposes of early detection of cancer is a further valuable product of the Commission's years of unremitting and largely unsung toil.

Although the charges of a few critics who snarl at the rare public utterances of the Commission are insupportable in reason, they must be nettling nevertheless; and compensatory praise cannot be expected, for the Commission must far more often dash hope than raise it. Yet the members of the Commission have reasons to know the best rewards of all—certainty that they have the cordial support of those who know them best, and the inner assurance that comes of a job well done.

LETTERS to the Editor . . .

VA Medical Care

April 27, 1953

IT HAS BEEN MY INTENTION for some weeks to write you in regard to an editorial brought to my attention in the March 1953 issue of CALIFORNIA MEDICINE. I do not know whether you or one of your associate editors wrote the editorial entitled, "Veterans and Politics." I regret that prior to its publication factual information was not sought in regard to the background for the subject of the editorial. I am providing factual information for I think you would wish to have it.

Of the \$40 million cut in the total appropriation for the Veterans Administration as a whole in the 1953 budget, slightly more than \$30 million had to be absorbed on a prorated basis during this fiscal year in medical and hospital activities. This was effected despite rising cost, new legislation which imposed increased work loads, and the opening of additional hospitals following their construction. As a direct consequence, a nationwide reduction of 2,250 skilled personnel was made in the Veterans Administration hospital system. In total, the hospital and domiciliary care programs were curtailed initially to the extent of \$20,652,960 with major budgetary cuts sustained in such areas as salaries, subsistence, contract hospitalization, utilization of con-

sultants and attendings, and miscellaneous operating expenses including the procurement of drugs and other essential therapeutic agents.

In the light of existing fiscal limitations, it has been necessary that hospital managers restrict the number of operating beds hitherto available for the reception of eligible veterans. The loss in operating beds now stands at 2,283. This is consistent with our policy that the number of beneficiaries afforded care in our hospitals may be restricted under such circumstances rather than to sacrifice the quality of professional service to which former members of the Armed Forces are entitled.

With reference to the out-patient programs of the Veterans Administration, which are of primary concern as indicated by the editorial appearing in the March issue of CALIFORNIA MEDICINE, the impact of this drastic retrenchment has been felt with special force. Initial reductions in this area of activity were applied as follows:

Salaries	\$2,972,079
Employee Travel including attendants.....	57,500
Medical Fee-Basis Services.....	1,000,000
Dental Fee-Basis Services.....	4,727,000
Total	\$8,756,579

The President's budget for fiscal year 1953 included an item in the amount of \$10,623,700 to cover costs incidental to providing fee-basis medical care such as that furnished under contract by the California Physicians' Service. This was reduced to \$9,623,700 until the third and fourth quarters of

the present fiscal year when a partial restoration of funds became possible through curtailment of other activities in the medical program that we considered less essential than the fee-basis medical program. The total monies restored to date is \$695,170 which means that the net reduction in this program has been \$304,830.

You will see that the original \$1 million plan cut in the medical fee-basis services represents but 1/30 of the reduced appropriations affecting the Department of Medicine and Surgery. You will also see the net reduction of \$304,830 represents approximately 1/90 of the reduced appropriations for the Department over which I preside.

Through Veterans Administration field stations, physicians participating in home town care activities were informed promptly that the shortage of funds made it mandatory that as the occasion demanded, reductions be made in the number of services authorized in connection with the fee-basis treatment of veterans. Moreover, the membership of state medical societies was advised to request additional visits in the event that authorized services proved to be inadequate in any given case. Finally, managers of regional offices were encouraged to transfer funds within the medical programs from those activities of a less essential nature to those having a high priority.

The Department of Medicine and Surgery recognizes its prime responsibility to provide a high standard of medical care to all its patients. It is insistent that the standard met must be uniform for service and non-service connected cases. If there were any attempt to dilute the service to the non-service connected cases, the service-connected veterans would be equally adversely affected. Unremitting efforts have been exerted to support out-patient activities as well as in-patient activities which will meet all critical needs. Whenever budgetary cuts have been applied, this has been accomplished in an equitable manner, taking into account work load increments and related factors, and as it pertains to out-patient service to pending applications.

It is noteworthy that of the \$10,003,394 actually allotted as of April 1, 1953, on a nationwide basis, the State of California has received \$2,156,911 for the fee-basis medical services, or 21.6 per cent of the total funds available. This represents a decrease of 13.11 per cent from the amount obligated in California during fiscal year 1952, as compared to a national average reduction of 13.34 per cent over the same period of time. The vital role filled by the

participating physicians in the medical care—and I should well add in the dental care of veterans—is fully appreciated. Without their valuable contributions the medical and dental programs would fail to attain the desired objective.

I hope this will clarify the reaction of the editorial writer, and perhaps as editor you will see fit to make correction in the forthcoming number of CALIFORNIA MEDICINE.

Very sincerely,

J. T. BOONE

*Vice-Admiral (MC) U.S. Navy, Retired
Chief Medical Director*

Department of Medicine and Surgery, Veterans Administration,
Washington, D. C.

Removal of Moles

Editor.

CALIFORNIA MEDICINE

In his otherwise excellent article Farris (Origin and Treatment of Malignant Melanoma, Calif. Med., 78:110, Feb. 1953) states that all methods of removal of moles other than sharp dissection should be condemned, particularly electrocoagulation. Such a sweeping statement is contrary to the experience of dermatologists who remove by far the great majority of moles.

Electrodesiccation and electrocoagulation have been used by dermatologists, for about fifty years, in the removal of selected types of moles largely for cosmetic purposes. The results have been eminently satisfactory. In a period of 35 years I have personally removed at least 3000 such moles and have no knowledge of a single one developing into a melanoma.

It should be emphasized that no one should remove moles by any method unless he is competent to evaluate the potential danger of the lesion being treated. Contrary to Doctor Farris' statement, biopsies can be done just as well with electrosurgery as when a scalpel is used.

The statement that sharp dissection is the only safe treatment of moles overlooks the method which some dermatologists use, particularly when a melanoma is suspected, namely the Mohs technic of chemosurgery. This microscopically controlled method is, in our opinion, the most accurate way of determining when every potentially malignant cell has been removed.

H. J. TEMPLETON, M.D.

NEWS & NOTES

NATIONAL • STATE • COUNTY

LOS ANGELES

The title of Master of the American College of Physicians was awarded to **Dr. F. M. Pottenger** of Pasadena on April 16 at the annual convention of the college. Dr. Pottenger is professor emeritus of medicine at the University of Southern California and founder of the Pottenger Sanatorium for respiratory diseases in Monrovia.

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The Gilbert J. Thomas Award for the best paper submitted during the recent convention of the American College of Surgeons was given to **Dr. Max R. Gasper** of Long Beach. His subject was "Methods and Results of Small Intestinal Anastomosis."

* * *

Dr. Richard R. Braskamp of Alhambra was elected president of the Association of Western Hospitals in convention at Salt Lake City in May. He is administrator of the Alhambra Hospital.

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The California Society of Pathologists honored **Dr. Alvin G. Foord** of Pasadena at a dinner during its semiannual meeting in Los Angeles in May.

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Dr. B. Rex Schmidt, recently returned from Army service in Korea, has been appointed district health officer for the San Fernando Valley by Dr. George M. Uhl, city health officer.

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Dr. Edgar F. Mauer was elected president of the Los Angeles County Heart Association at the annual meeting in April, and **Dr. Clifford B. Cherry** was elected vice-president.

RIVERSIDE

One of three physicians representing the Riverside County Medical Society on the county general hospital commission, **Dr. Fred A. Clark** has been appointed to succeed Dr. Van R. Hamilton.

SANTA CLARA

Grants-in-aid for cancer research totaling \$45,242 were awarded to eight investigators at Stanford University for the 1953-54 period by the American Cancer Society. The recipients and their awards are: Dr. Victor C. Twitty, head of the department of biological science, \$8,000; Dr. A. Clark Griffin, associate professor of biochemistry, \$4,698; Dr. Paul Kirkpatrick, professor of physics, \$9,000; Dr. Hadley Kirkman, professor of anatomy, \$5,184; Dr. Murray Luck, professor of biochemistry, \$5,000; Dr. Hubert S. Loring, professor of biochemistry, \$8,500; Dr. E. L. Tatum, profes-

sor of biology, and R. W. Barratt, research associate, \$4,860. The awards are for continuation of work supported during the 1952-53 period.

STANISLAUS

Dr. William Van Deventer of San Mateo has been appointed medical director and superintendent of the Stanislaus County Hospital.

GENERAL

Two members of the California Medical Association were elected directors of the Industrial Medical Association in convention at Los Angeles in April. They are **Dr. John E. Kirkpatrick** of San Francisco and **Dr. Benjamin M. Frees** of Los Angeles. They will serve for the period 1953-1955.

* * *

The annual Assembly in Otolaryngology sponsored by the University of Illinois College of Medicine will be held in late September and early October. Surgical anatomy and cadaver dissection of the head and neck and histopathology of the ear, nose and throat will be studied September 21 through 26. Lectures and panel discussions will be held September 28 through October 3. Information may be obtained from the department of otolaryngology of the college, 1853 West Polk Street, Chicago 12.

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Dr. William S. Kiskadden of Los Angeles was elected president of the California Society of Plastic Surgeons in convention at Santa Barbara in April. Dr. Albert D. Davis was elected vice-president, and Dr. Katherine L. Stephenson of Santa Barbara was reelected historian.

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Utilization of human placentas as a source of blood serum for the production of immune serum globulin was urged in a resolution passed in 1949 and recently reaffirmed by the State Board of Public Health. The resolution calls upon hospitals to make placentas available to producers of biologic materials.

* * *

The third International Congress of Internal Medicine will be held in Stockholm, Sweden, September 15 to 18, 1954. The two main subjects for discussion will be the pathogenesis and treatment of hypertension and the mesenchymal (collagenous) diseases. Information may be obtained from the congress at the Karolinska Sjukhuset, Stockholm 60.

* * *

More than 2,000 public health and medical experts will meet in Los Angeles June 10-13 for the annual session of the Western Branch of the American Public Health Association. The eleven western states, Hawaii and Alaska will be represented. President of the organization is Dr. L. S. Goerke, chief of the medical division of the Los Angeles city health department.

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Applications for appointment as medical officers in Federal agencies not included in the U. S. Public Health Service and the Veterans Administration are invited by the U. S. Civil Service Commission.

Available positions, some for hospital and clinical service, some for administrative or supervisory work, have a starting salary of \$7,040 per year, plus vacation and sick leave.

Applicants must be graduates of a recognized medical school, must be licensed to practice in a state or territory of the United States, and must have had a year of progressively responsible professional experience in the field for which they are appointed. There is no age limit for most positions.

Information regarding appointments may be obtained from the Regional Director, U. S. Civil Service Commission, 630 Sansome Street, San Francisco 11.

* * *

Exchange of educators, postgraduate students and research workers in medicine and allied sciences will be encouraged by the **Interamerican Foundation for Postgraduate Medical Education**, whose president is Dr. Alberto Chattas of Argentina. The purpose of the foundation is to coordinate and extend present programs for fellowships to Latin Americans for postgraduate training in the United States and also to arrange for interchange of visiting lecturers. Financial support is being solicited from commercial firms in the United States which are interested in encouraging these programs.

Dr. James T. Case of Santa Barbara is vice-president of the foundation and Dr. Charles Pierre Mathe of San Francisco is a director.

Headquarters are at 112 East Chestnut Street, Chicago 11, Ill.

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"A Doctor for Your Community" is the title of a pamphlet to be published in June by the American Medical Association. It discusses the problems involved in obtaining a physician for a community and suggests what a community can do to attract and keep a physician. The pamphlet will be made available through state medical societies to communities listed with the societies' placement services.

POSTGRADUATE EDUCATION NOTICES

MEDICAL EXTENSION UNIVERSITY OF CALIFORNIA

Postgraduate Courses for 1953

Pediatric Conference, June 22 through 26. Fee to be announced. Medical Center.

Conference on General Surgery, June 15 through 19. Fee \$75.00. Medical Center.

Obstetrical and Gynecological Conference, September 2, 3, 4. Place and fee to be announced.

Ophthalmology (for specialists), September 7 through 12. Fee \$75.00. Medical Center.

Medicine for General Practitioners, September through November. East Oakland Hospital. Fee \$50.00.

Evening Lectures in Medicine, September through November. Fee \$50.00. Mills Memorial Hospital, San Mateo (probably).

Occupational Health, October 14, 21, 28 and November 4. Fee to be announced. Medical Center.

Contact: All inquiries to be addressed to Stacy R. Mettier, M.D., Professor of Medicine, Head of Postgraduate Instruction, Medical Extension, University of California Medical Center, San Francisco 22.

STANFORD UNIVERSITY SCHOOL OF MEDICINE

Cardiology—Date: June 15-19. Fee: \$75.00.

General Medicine—Date: June 15-19. Fee: \$75.00.

Surgery of Trauma—Date: June 22-26. Fee: \$75.00.

General Surgery—Date: June 22-26. Fee: \$75.00.

Programs and further information may be obtained from the Office of the Dean, Stanford University School of Medicine, 2398 Sacramento Street, San Francisco 15, California.

UNIVERSITY OF CALIFORNIA AT LOS ANGELES MEDICAL EXTENSION in cooperation with SCHOOL OF MEDICINE

Laboratory Technicians' Symposium—Date: June 20 and 21 (all day)—UCLA Campus. Fee: \$15.00.

Contact: Dr. Thomas H. Sternberg, Head of Postgraduate Instruction, Medical Extension, University of California, Los Angeles 24.

UNIVERSITY OF SOUTHERN CALIFORNIA SCHOOL OF MEDICINE

Graduate Course in Gastroenterology—Date: September, 1953 through August, 1954. Fee to be announced.

Contact: George K. Wharton, M.D., Clinical Professor of Medicine, Medical Research Building, 2025 Zonal Avenue, Los Angeles 33.

COLLEGE OF MEDICAL EVANGELISTS

Diseases and Injuries of Bones and Joints—Date: July 6-31. Fee to be announced.

Full-Time Basic Science Course in Surgery and Surgical Specialties—Date: October 5, 1953 through June 11, 1954. Fee to be announced.

Contact: H. M. Walton, M.D., Chairman, Postgraduate Division, 312 North Boyle Avenue, Los Angeles 33.

RESEARCH STUDY CLUB OF LOS ANGELES

23rd Annual Clinical Convention of Ophthalmology and Otolaryngology.

Date: January 18 through January 29, 1954. Each applicant must be a member in good standing of the American Medical Association in order to become eligible for attendance.

Fee: \$100.00.

Contact: Pierre Violé, M.D., Treasurer, 1930 Wilshire Boulevard, Los Angeles 5, Calif.



THE PHYSICIAN'S *Bookshelf*

DERMATOLOGY—*Essentials of Diagnosis and Treatment*. Marion B. Sulzberger, M.D., Professor and Chairman, Department of Dermatology and Syphilology; and Jack Wolf, M.D., Associate Professor of Dermatology and Syphilology; both of New York University Postgraduate Medical School. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago, 1952. 592 pages, \$10.00.

This is one of the most valuable dermatological texts which your reviewer has ever read. Thoroughly up to date, it presents the latest in clinical, experimental and therapeutic advances. The authors do not follow a stereotyped textbook approach but give their own findings and opinions. They tell what drugs to use, how to use them and where to obtain them and, also, of the pitfalls to avoid.

The color photographs are excellent. The black and white photographs suffer somewhat from being crowded, too many to the page.

Although the authors warn of the sensitizing powers of benzocaine and nupercaine they occasionally include them in their prescriptions. These drugs would better be avoided.

* * *

LOGAN TURNER'S DISEASES OF THE NOSE, THROAT, AND EAR—Fifth Edition. Edited by Douglas Guthrie. The Williams and Wilkins Company, Baltimore, 1952. 478 pages, 246 illustrations and nine colored plates, \$8.00.

The demand for another (Fifth Edition) of the book speaks well for its popularity. It covers over forty years of experience of many authorities in the field of otolaryngology from this department of the Edinburgh Royal Infirmary.

This edition has been largely brought up to date by incorporating new methods and by the addition of chapters on allergy, direct laryngoscopy, otosclerosis, and the use of sulfa drugs and the antibiotics, in the diseases of the ear, nose and throat. Unfortunately a few of the remedial measures advised, such as alkalinizing the system, are no longer in as general use as they were when other editions of the book were published. Some of these could well have been omitted.

The chapter on allergy is not as complete as might have been desired, since allergy has been found to play such an important part in diseases of the ear, nose and throat. This could be said of otitis media with effusion. However, following the intent of the book, these might be considered sufficient. It is designed especially for senior medical students and general practitioners and as such, meets these requirements.

It has nine excellent colored plates, which depict very well the subject matter. The illustrations are numerous and good.

With the vast clinical experience it represents and with its clarity and brevity, it is well worth while as a reference book for those for whom it is intended, but would hardly be adequate for the specialist in otolaryngology.

BODY TEMPERATURE—*Its Changes with Environment, Disease and Therapy*. W. A. Selle, Ph.D., Professor of Biophysics and Physiology, University of California Medical School, Los Angeles. Charles C. Thomas, Publisher, Springfield, Illinois, 1952. 112 pages, \$3.50.

In this monograph from the American Lectures in Physical Medicine Series, the author has given a scanning review of the pertinent literature concerning body temperature in a manner of particular interest to physiologists and to investigators who might wish to have a well tempered synthesis and abstract of the mechanical and other features of the 222 references which cover the subject up to and including 1951.

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PAIN SENSATIONS AND REACTIONS. James D. Hardy, Ph.D., Associate Professor of Physiology, Cornell University Medical College; Harold G. Wolff, M.D., Professor of Medicine (Neurology), Cornell University Medical College; and Helen Goodell, B.S., Research Fellow in Medicine, Cornell University Medical College. The Williams and Wilkins Company, Baltimore, 1952. 435 pages, \$6.50.

Most physicians are familiar with at least a part of Dr. Wolff's researches on the problem of pain. His standardization of the experimental production of painful sensation by light radiation has served to place study of this hitherto very qualitative attribute on a reasonably quantitative basis. This book is largely a compilation and systematization of the many papers which have appeared by Dr. Wolff and his co-workers over the years. On the foundation of the experimentally determined facts about pain, he has elaborated some theoretical concepts regarding the part that pain plays in the determination of human behavior that are of great importance to the practicing physician. He gives a clear exposition of the concept of the internuncial pool and central excitatory state which is helpful in understanding the clinical effectiveness of procaine injections in chronic pain states. Although one need not agree with all the hypotheses set forth, they are provocative of thought, and the experimental basis for them is a sound foundation for further theorizing. The style is clear and easily understood; it is possible, however, to get lost in the mass of detail.

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1952 YEAR BOOK OF DRUG THERAPY. Harry Beckman, M.D., Director, Departments of Pharmacology, Marquette University Schools of Medicine and Dentistry. The Year Book Publishers, Inc., 200 East Illinois Street, Chicago, 1952. 606 pages, \$5.50.

Like its predecessors, the 1952 Year Book of Drug Therapy can be recommended to the practicing physician who wishes to keep up with latest information on pharmacotherapy (see *CALIFORNIA MEDICINE*, 76:64, May 1952).

Among the items receiving considerable attention in this volume are cortisone, ACTH, the broad spectrum antibiotics, the therapy of tuberculosis and the potential toxicity of all potent drugs.

MANUAL OF GYNECOLOGY. E. Stewart Taylor, M.D., Professor and Head of the Department of Obstetrics and Gynecology, University of Colorado School of Medicine. Lea & Febiger, Philadelphia, 1952. 201 pages, 70 illustrations, \$1.50.

This small volume was written for medical students and for physicians engaged in general practice. It could serve as a framework for an introductory course in the non-surgical aspects of gynecology, but many of its statements need elaboration and qualification. Briefly, it consists of the thoroughly boiled-down opinions of the author and a few carefully chosen references to current literature. While most of the viewpoints in this book are soundly based, the author has found it necessary on some occasions to resort to an air of decisiveness which is not entirely warranted. On the whole, however, his specific directions for the handling of gynecologic problems are admirable and many practitioners might improve their results by heeding the admonitions in this manual. This is particularly true with respect to the final chapter, which deals with hormone preparations. All who have come to rely upon these disappointing vehicles in the management of a great array of gynecologic problems should be urged to read this chapter.

It is unfortunate that some of the illustrations have been badly reproduced, and this applies not only to those borrowed from familiar sources but also to quite a number of the photographs of surgical specimens. On the other hand the type face is attractive and easy to read, but numerous minor typographical errors were passed over by the proof-reader. Despite its technological defects, this book is recommended to all who feel a need for a brief refresher course in gynecology.

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OPHTHALMIC PLASTIC SURGERY. Sidney A. Fox, M.S. (Ophth.), M.D., F.A.C.S., Assistant Clinical Professor of Ophthalmology, New York University Postgraduate Medical School. Grune & Stratton, New York, 1952. 290 pages, \$15.00.

This book contains 17 chapters and 290 pages. The first chapter gives the practical anatomy of the eye adnexa, in connection with the surgical anatomy. The second chapter, a very concise one, gives the fundamentals of lid surgery. The third chapter discusses the various types of grafts. The subsequent chapters give the accepted techniques in plastic surgery of the adnexa of the eye. The illustrations are simple and much more understandable than most.

This book is in the reviewer's opinion a very useful one for the ophthalmic surgeon.

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THE ANATOMY OF THE NERVOUS SYSTEM—Its Development and Function—New, 9th Edition. Stephen Walter Ranson, M.D., Ph.D., late Professor of Neurology and Director of Neurological Institute, Northwestern University Medical School, Chicago. Revised by Sam Lillare Clark, M.D., Ph.D., Professor of Anatomy, the Vanderbilt University School of Medicine, Nashville. W. B. Saunders Company, Philadelphia, 1953. 581 pages with 434 illustrations, 18 in color, \$8.50.

So standard is this textbook of neuroanatomy that there are few physicians trained in the past 25 years who have not had some familiarity with it in their student days. This latest edition maintains the excellence of its predecessors. It has been brought up to date in some particulars, but for the student or physician who has or can gain access to an earlier edition the acquisition of the new one is hardly worth while. The text is clear, and the illustrations well chosen and excellently reproduced. The book admirably serves its purpose as a neuroanatomy text; it was neither intended for nor can it be successfully used as a substitute for a textbook of clinical neurology.

INFECTIOUS MONONUCLEOSIS. Sidney Leibowitz, M.D., Associate Physician, Beth Israel Hospital, New York, N. Y. Modern Medical Monographs No. 5. Grune & Stratton, New York, 1953. 163 pages, \$1.75.

This monograph is needed by those physicians who deal with adolescent or young adult populations and it contains necessary information for the general practitioner and the internist. The literature on infectious mononucleosis continues to be scattered in periodicals and, with the exception of excellent chapters in the major systems, there has been no way hitherto for the physician to have the advantages of the monographic approach. It is strange that excellent monographs exist in the German, French, Dutch and the Danish languages and yet this is the first monograph on infectious mononucleosis to achieve separate publication in English.

Leibowitz bases his opinions upon a painstaking clinical study of patients seen in his own practice. He considers, in a most selective manner, the evidence to be derived from the study of the blood and of the serologic reactions and makes it possible for the practicing physician to interpret laboratory reports wisely. It is gratifying to note that Leibowitz deals with the disease as a general disorder and emphasizes that infectious mononucleosis is one of the acute benign reactions of the reticulo-endothelial system.

The monograph is short, but devotes full attention to the manifestations of infectious mononucleosis in the liver, central nervous system and in the heart. The author exhibits a broad and understanding acquaintance with the literature and his bibliography of 377 references is quite up to date. I do not know of any other separate publication in English that can be as useful to the physician in the diagnosis and treatment of infectious mononucleosis. It will also serve as an adequate introduction to the world's literature on the subject. Physicians who deal with military or with student populations will find it indispensable.

* * *

GIFFORD'S TEXTBOOK OF OPHTHALMOLOGY—Fifth Edition. Francis Heed Adler, M.D., Professor of Ophthalmology, University of Pennsylvania Medical School, Consulting Surgeon, Wills Eye Hospital, Philadelphia. 488 pages, 281 figures and 26 color plates. W. B. Saunders Company, Philadelphia, 1953. \$7.50.

Gifford's Textbook on Ophthalmology became established as one of the standard textbooks on ophthalmology for medical students and general practitioners. Following Dr. Gifford's death in 1944 Dr. Adler took over the fourth edition of the book. In the new fifth edition there has been considerable improvement in the book. In previous editions too much emphasis was placed on parts of ophthalmology that would require more knowledge than the average medical student or general practitioner possessed.

In this new edition the enlargement of the section on hypertensive disease and diabetes gives the student and the general practitioner much additional information on the fundus condition of these important diseases. The omission entirely of the section on operations is a further improvement in the book.

Certain parts have been rewritten, particularly in the field of therapeutics, bringing up to date the latest developments in the antibiotics, and in the use of ACTH and cortisone. The illustrations are excellent, the paper is good and the general format very pleasing. The inclusion of Dr. Scheie's drawings on ophthalmoscopy has added further to the value of the book. The short chapter on therapeutic agents will be found very valuable.

All in all the new edition seems a definite improvement over the fourth edition and should make a very valuable hook for the student and a quick reference book for the general practitioner. There is a very complete index which adds a great deal to the book.

OFFICE MANAGEMENT OF OCULAR DISEASES. William F. Hughes, Jr., M.D., Professor and Head of Department of Ophthalmology, University of Illinois College of Medicine, The Year Book Publishers, Inc., 200 East Illinois Street, Chicago, 1953. 451 pages, \$9.00.

In this book the author attempts to present practical details of diagnosis and treatment of a specific patient. The chapters are under the following headings: vision; refraction; lids; lacrimal apparatus; orbit; disorders of ocular motility; conjunctiva; cornea; sclera; glaucoma; intraocular inflammation; lens and vitreous; conditions of the ocular fundus; neuro-ophthalmology; ocular injuries; radiation treatment; and ophthalmic formulary. The index is extensive and adequate.

The first 86 pages are devoted to optics and refraction and contain many valuable practical points. In the discussion of the various diseases the important differential diagnostic points are presented and the treatment outlined. The author recommends the specific treatment together with other therapeutic measures in the event that the usual treatment is not effective. This is an advantage over many books where a number of therapeutic measures are recommended but the choice of the specific agent is left to the reader.

The numerous tables of differential diagnosis are especially valuable. The formulary of some 20 pages is very helpful in that it contains all the necessary information in regard to the use of the various drugs employed in ophthalmology, so that the ophthalmologist can quickly refresh himself on the dosage, etc., of a seldom used but important therapeutic measure.

The chapter of radiation treatment is perhaps a little over-enthusiastic and one wonders if some of the statements made have "stood the test of time" as mentioned by the author.

The paper is good, the printing easily readable and the general format excellent. The line drawings are good, as are the charts. The reproduction of photographs of external diseases is generally fair, but some of the fundus photographs are not up to the standard of the rest of the book.

The book should be in a readily accessible place in every ophthalmologist's office as a rapid reference on the care and management of office patients. Because of the excellent formulary it is a "must" for the younger practitioner who has been brought up on the antibiotics and cortisone and who often is not familiar with the old "tried and true" methods that have stood the test of time, and which may be effective when the newer therapeutic measures fail.

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ESSENTIALS OF BODY MECHANICS IN HEALTH AND DISEASE—Fifth Edition. Joel E. Goldthwait, M.D., F.A.C.S., LL.D., Sc.D.; Lloyd T. Brown, M.D., F.A.C.S.; Loring T. Swaim, M.D., and John G. Kuhns, M.D., F.A.C.S., Sc.D. J. B. Lippincott, Philadelphia, 1952. 356 pages, 135 illustrations, \$6.00.

The Essentials of Body Mechanics in Health and Disease is now in its fifth edition. There is a great deal of value in this book, particularly for a medical man who is interested in the total problem of the patient as against the specific correction of an individually specific disease. Too often in the field of medicine we become interested in curing a specific entity with drugs and forget the physiological changes which have occurred and which will continue to present problems unless corrected.

Dr. Goldthwait has been a pioneer in the study of the relation of body mechanics to the general physiological well being of the human body. The present edition is a further combination of the extensive contributions he has made to the study of this subject.

There are many conclusions or assumptions made in the book which probably are not scientifically or positively cor-

rect and provable, but at least the recommendations made by the authors form a useful basis for control of the problem of body mechanics in relation to disease and maintenance of health. Perhaps the best contribution of the book is its extensive and detailed bibliography following each chapter.

The book must of its very nature have a limited appeal. It probably should be read carefully by more practicing physicians generally because the subject which it presents is all too frequently ignored by the average doctor.

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BASEDOW'S DISEASE. H. Sattler, M.D., Professor of Ophthalmology, University of Leipzig, Germany. English translation by G. W. and J. F. Marchand. The Manifestations, Timing, Duration and Outcome of Basedow's Disease; Symptoms, Severity and Age Incidence; the Disease in Children, and Its Occurrence Among Animals. Grune & Stratton, Inc., New York, 1952. 605 pages, \$10.00.

This unique volume makes available for the first time in English an exhaustive reference work on the natural course of exophthalmic goiter, covering the years 1722 to 1909. It is a work of encyclopedic character, and because it antedates current methods of treatment, consists almost entirely of descriptions of the untreated disease and its course. It was compiled at a time when metabolism testing was still in the research stage in Magnus-Levy's laboratory. The diagnosis of thyroid dysfunction, therefore, was based purely on the observation of signs and symptoms. It is refreshing and inspirational to relearn the value of observation without the use of technical laboratory procedures. The section on symptomatology covers 340 pages and includes 100 pages on the ophthalmic complications alone; illustrative case summaries are interspersed with the text. The bibliography contains 3,210 references arranged according to the year of publication.

The reader of this volume cannot fail to be impressed with the intense interest, knowledge and industry of the author. It will be a valuable addition to the reference library of the endocrinologist, ophthalmologist, internist and those interested in the history of medicine.

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LUMBAR DISC LESIONS—Pathogenesis and Treatment of Low Back Pain and Sciatica. J. R. Armstrong, M.D., M.Ch., F.R.C.S., Orthopedic Surgeon to the Metropolitan Hospital and Lambeth Hospital, Visiting Orthopedic Surgeon to Manor House Hospital. E. & S. Livingstone, Ltd., London, distributed by Williams and Wilkins, Baltimore, 1952. 228 pages, \$8.00.

Such is the bulk of knowledge in medicine in the present day that the textbook has almost become a thing of the past, and the monograph has taken its place. This book, although its title would indicate it is limited to a consideration of lumbar disc lesions, embraces a consideration of many other causes of the syndrome of low back pain and sciatica. It is obviously the work of an orthopedic surgeon. Without being too partisan in the controversy over whether the lumbar disc is in the field of the orthopedist or the neurosurgeon, one cannot but question the adequacy of the purely bone and joint approach to a problem which is certainly chiefly neurological in its manifestations. The author presents in great detail his theory of the pathogenesis of disc protrusion, and the manner in which symptoms result from stretching of nerve roots as well as direct interference with joint function. The latter part of the book deals with the technique of the operative approach in considerable detail, illustrated with some very fine color plates. Medical treatment is also described, with notable absence of consideration of traction. In all, the book is of considerable interest to the specialist, but would probably not be too helpful to the general physician.

HANDBOOK OF GYNAECOLOGICAL DIAGNOSIS — For Practitioners and Students—Walter Neuweiler, M.D., Professor of Midwifery and Gynecology and Director of the Gynaecological and Obstetrical Clinic in the University of Berne, Translated from the German by Dr. Paul Ederer, Grune and Stratton, New York, 1952. 447 pages, \$12.00.

In 1946 Professor Walter Neuweiler of the University of Berne in Switzerland published a manual of instruction on gynecologic diagnosis for students and practitioners. Neuweiler pointed out that it was not meant to compete with standard textbooks but aimed at guiding student and practitioner alike in organizing a logical approach to therapy through the orderly development of clinical diagnosis, leaving the details of laboratory diagnosis to more elaborate texts. The book, written in a crisp, descriptive German, discussed clinical diagnosis of the disturbances of the female genito-urinary tract in a broad and informative manner and was well illustrated with photographs of major and minor lesions albeit rather skimpy on morphologic illustrations. The book made good reading for anybody fully conversant with medical German.

Grune & Stratton of New York now offer an English translation by Paul Ederer, titled "Handbook of Gynaecological Diagnosis." It contains the same number of illustrations but is briefer than the original. In comparing this translation with the original one cannot escape sensing that the translator did his job with considerable help from the dictionary hut in so doing managed to misinterpret the meaning of many words, therewith distorting the intent of important deductions related to the significance of the symptoms. One cannot help but wonder if the translator actually was conversant with gynecologic matters. He certainly was not adequately conversant with the comparative value of words as used in German and English. For instance, in speaking about menstrual irregularities the original clearly defines the difference between oligomenorrhea and polymenorrhea but the translator lumps them as "regular hemorrhages of menstrual character." Mistranslations of this sort are encountered throughout the English translation and do injustice to the original and rob it of its delightfully precise descriptiveness. For anybody not familiar with the original this may not be so evident although the reader still will be puzzled over some of the statements as they appear here. For those who can overlook these shortcomings the book offers itself as a good guide to diagnosis.

A very brief bibliography is appended to the text. Evidently, Neuweiler compiled his manual primarily on the basis of personal experience without an attempt to bring in comparative information. However, there is nothing new in his book that one could not find as readily in any recent edition of American textbooks of gynecology. If the translation were perfect one might overlook this and say to those who enjoy surrounding themselves with many books that this diagnostic manual can serve a purpose in offering itself as a quick reference guide. One might add that if the publishers would condescend having the translation revised by an expert it would do better justice to the original author.

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INTERNATIONAL HEALTH ORGANIZATIONS AND THEIR WORK—Neville M. Goodman, M.A., M.D. (Camb.), F.R.C.P. (Lond.), D.P.H. (Lond. Univ.) The Blakiston Company, Philadelphia, 1952. 327 pages, \$6.50.

That disease has been the most profound moulder of human history is a thesis for which much substantiation can be found. Malaria was a major factor in the decline of both Greek and Roman civilizations; smallpox contributed to the conquest of the natives of the western hemisphere by Europeans; syphilis and bubonic plague wrought havoc in Europe; and cholera and smallpox, along with malaria,

have served to keep the peoples of the East in privation. Several military campaigns were turned more by typhus than by the genius of generals.

Early international efforts to control the spread of contagion were more restrictive than cooperative, but the interests and the necessities of commerce led to agreements between nations to exchange information and to trust each other to control the export of infection, rather than maintain rigid quarantine barriers to prevent its importation. Within the present century, there has been growing awareness that "No man is an island, entire of itself," nor is any nation, and that the health of each remote country affects the welfare of all. Although only a few favored areas have accomplished the eradication or practical control of man's ancient pestilences, the worldwide achievement of these goals is within our capabilities by the application of known methods of demonstrated effectiveness. We can even be bold enough to say, "Health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. The enjoyment of the highest attainable standard of health is one of the fundamental rights of every human being . . ." and "The health of all peoples is fundamental to the attainment of peace and security. . . ."

Neville Goodman provides a detailed history of the progress of international organization for the outlined purposes. He writes from the vantage point of active participation in the work of the Health Organization of the League of Nations, UNRRA, and the World Health Organization. He has had access to many original sources, which he quotes extensively, and presumably, accurately. He is more concerned with setting down the facts than with interpretations of significances, but even so, he is not without an occasional moment of humor and such cogent observations as the uncomfortably hot weather of New York City during the World Health Conference of 1946 at which the Constitution of the World Health Organization was adopted.

This is a book of lasting value. As memories dim with the passing years, it will become increasingly useful as the sole reference in which the detailed record of an important episode of human endeavor has been collected. It will provide the background for the interpretation of documents whose meanings may become clouded by the changing values of words.

* * *

ELECTROCARDIOGRAPHY IN PRACTICE—3rd Edition—Ashton Graybiel, M.D., Captain, MC, USN, Director of Research, United States Naval School of Aviation Medicine, Pensacola; Paul D. White, M.D., Executive Director, National Advisory Heart Council; Consultant in Medicine, Massachusetts General Hospital; Louise Wheeler, A.M., Executive Secretary, Cardiac Laboratory, Massachusetts General Hospital; and Conger Williams, M.D., Instructor in Medicine, Harvard Medical School. W. B. Saunders Company, Philadelphia, 1952. 378 pages, 294 figures, \$10.00.

This atlas of electrocardiography is a sound, relatively superficial discussion of the modern concepts of electrocardiography. Its strengths consist of the authoritative comments by the outstanding authors, its section on arrhythmias, its excellent illustrations, and its section on electrocardiograms for interpretation by the reader. The weaknesses concern the relative paucity of discussion of the physiological and electrical factors responsible for the electrocardiogram, a relatively weak section on vectorcardiography, and a failure to clearly represent the developing patterns of electrocardiographic abnormalities. The illustrations largely represent well defined patterns. Incompletely developed patterns are ones that the physician frequently encounters and it is these, more than the obvious patterns, with which he needs most help.

In general, the book is an excellent summary of conservative modern-day electrocardiography and a distinct improvement over the second edition.

AN ATLAS OF SKULL ROENTGENOGRAMS. Bernard S. Epstein, M.D., Associate Radiologist, the Jewish Hospital, New York; and Leo M. Davidoff, M.D., Neurosurgeon, Mount Sinai Hospital, New York. Director of Neurological Surgery, the Beth Israel Hospital, New York. Lea & Febiger, Philadelphia, 1953. 415 pages, 603 illustrations on 315 engravings, \$15.00.

Added to the numerous recent volumes on the x-ray examination of the skull is this atlas from New York City. After the usual chapters on the normal skull, and on congenital variations and malformations, there are chapters on trauma, infections, brain tumors, miscellaneous tumors, tumors of the vault of the skull and non-neoplastic diseases of the skull.

The work purports to be an atlas, and we are happy to report that the roentgenograms are of good size and most are of good quality. The legends permit examination of the reproductions without reference to the text. The text is pleasantly brief. There are a number of laminograms, but the work does not cover encephalograms, ventriculograms or angiograms.

There is a particularly good chapter on meningiomas. The index is rather brief. The book will be of value to radiologists.

* * *

FANCONI AND WALLGREN'S TEXTBOOK OF PEDIATRICS—Edited by W. R. F. Collis, M.A., M.D., F.R.C.P., F.R.C.P.I., D.P.H., Lecturer in Pediatrics, Dublin University; Director, Department of Pediatrics, Rotunda Hospital, Dublin. Translator and Co-Editor: E. Kawerau, M.B., M.Sc., A.R.I.C., Senior Lecturer in Chemical Pathology, St. Mary's Hospital, London. Grune & Stratton, New York, 1952. 1104 pages, \$19.50.

This is an excellent translation of the Textbook of Pediatrics by Fanconi and Wallgren, which first appeared in the German language in 1950 and has since gone through a second edition. The present volume incorporates some, but not all, of the revisions which appeared in the second German edition. It is printed on high quality paper which sets off well the numerous illustrations and diagrams which supplement the text.

In addition to the chapters written by the chief authors and their Swiss and Swedish colleagues, numerous additional contributors from England, Holland, Germany, Finland, Norway and Czechoslovakia are included.

Together with the English text of Moncrief and Patterson, this volume probably represents the most up-to-date and complete work on general pediatrics published outside of the United States. As such, it will prove a useful and stimulating supplement to standard American texts in the library of pediatricians and those physicians who are particularly interested in children. Although there is a list of selected references for each chapter, the American reader will find less documentation of statements than that to which he is accustomed in texts published in this country. There is usually a more personal quality to the writing, in which the opinion of the author is given considerable weight. This particular characteristic is often found in European medical literature, and it is apt to either please or annoy one—depending on what is being sought. In any case, it makes for stimulating and interesting reading, particularly of a supplemental type.

* * *

DOCTOR'S SOLILOQUY, A—Joseph Haykim Krimsky, M.D. Philosophical Library, New York, N.Y., 1953. 116 pages, \$2.75.

There are many types of philosophers, the light, the heavy, the silent and the loquacious. Perhaps one of the more distinguished light and loquacious ones in recent years was Mr. Will Rogers. While immortalized for his observation that all he knew was what he read in the papers, he may perhaps be better remembered for his happy remark, made

while gazing at the chorus girls in New York: "Think of it," he said, "five or six years from now every one of those girls will be a year older."

Amongst the heavy philosophers appear many of the great names of thought and literature, including Leviticus, Marcus Aurelius and Plato. Their obiter dicta were numerous, and the things for which they are best remembered are spread upon the pages of a thousand texts.

The author of this little soliloquy has drawn heavily upon these spreadings, and reflects or reproduces them with liberal interleavings from the Bible. He has gathered his "thoughts" more or less in the style of The Meditation, but seasoned them not with the light touch of humor nor the wry smile of St. Francis. The 116 pages are divided into a series of 37 sections, in which the author wanders from the days of his youth to the evenings of his seniority. In the resume he opines that ethical religion is the "binding force to tie all men together. . . . In all great religions is ethical conduct. . . . in the Ten Commandments, and in the cardinal precepts of Confucianism, Buddhism, Hinduism and Islam."

The author is a graduate of New York University and Bellevue Medical College; he has practiced medicine for almost 50 years, the last several being in the Veterans Administration Clinic of Huntington, West Virginia. He appears to be a serious student of scripture and philosophy.

* * *

UNIPOLAR LEAD ELECTROCARDIOGRAPHY AND VECTORCARDIOGRAPHY—Including the Standard Leads, the aV and V Leads, the Cardiac Arrhythmias and the Principles of Vectorcardiography—3rd Edition—Emanuel Goldberger, M.D., F.A.C.P., Associate Attending Physician, Montefiore Hospital, New York, Lecturer in Medicine, Columbia University. Lea & Febiger, Philadelphia, 1953. 601 pages, 312 illustrations, \$10.00.

This third edition of Goldberger's well-known text is far superior to the previous two. He has brought the subject of electrocardiography up to date and has included one of the clearest discussions of vectorcardiography now available. His discussion of the electrical axis, ventricular gradient and vectorcardiography is a sound presentation of the principles, yet does not include the minute technical details which would be confusing to the practicing physician and for which original manuscripts should be consulted. His emphasis on the spatial vector and not merely the frontal plane vectorcardiogram is to be commended.

The chapter on the derived vectorcardiogram with his own method, using orthographic projection, is quite helpful.

The section on interpretation of normal and abnormal vectorcardiograms is relatively incomplete, because the reader does not know how consistent is the pattern that Goldberger describes. Furthermore, he does not give a sufficient discussion on what additional information, if any, can be obtained from the vectorcardiogram.

The reviewer disagrees with Goldberger when the author attempts to differentiate left ventricular hypertrophy from left ventricular strain, basing the former on high voltage of the QRS complex and the latter on ST-T changes. Stress is a mechanical term, whereas the electrocardiogram records electrical events. Further, ST-T abnormalities are quite common in left ventricular hypertrophy.

One last criticism is that the book would be more palatable if the author did not use the personal pronoun "I" with such avidity.

The book is an excellent addition to our literature on electrocardiography and vectorcardiography, is remarkable for the author's own original contributions and methods of presentation, and as such should be very well received by the medical profession.

California M E D I C I N E

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KEY TO ABBREVIATIONS USED

(Or.)—Original Article; (Ed.)—Editorial; (CMA)—California Medical Association; (CR)—Case Report; (I)—Information; (LE)—Letters to the Editor.

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(Continued from Front Advertising Section, Page 41)

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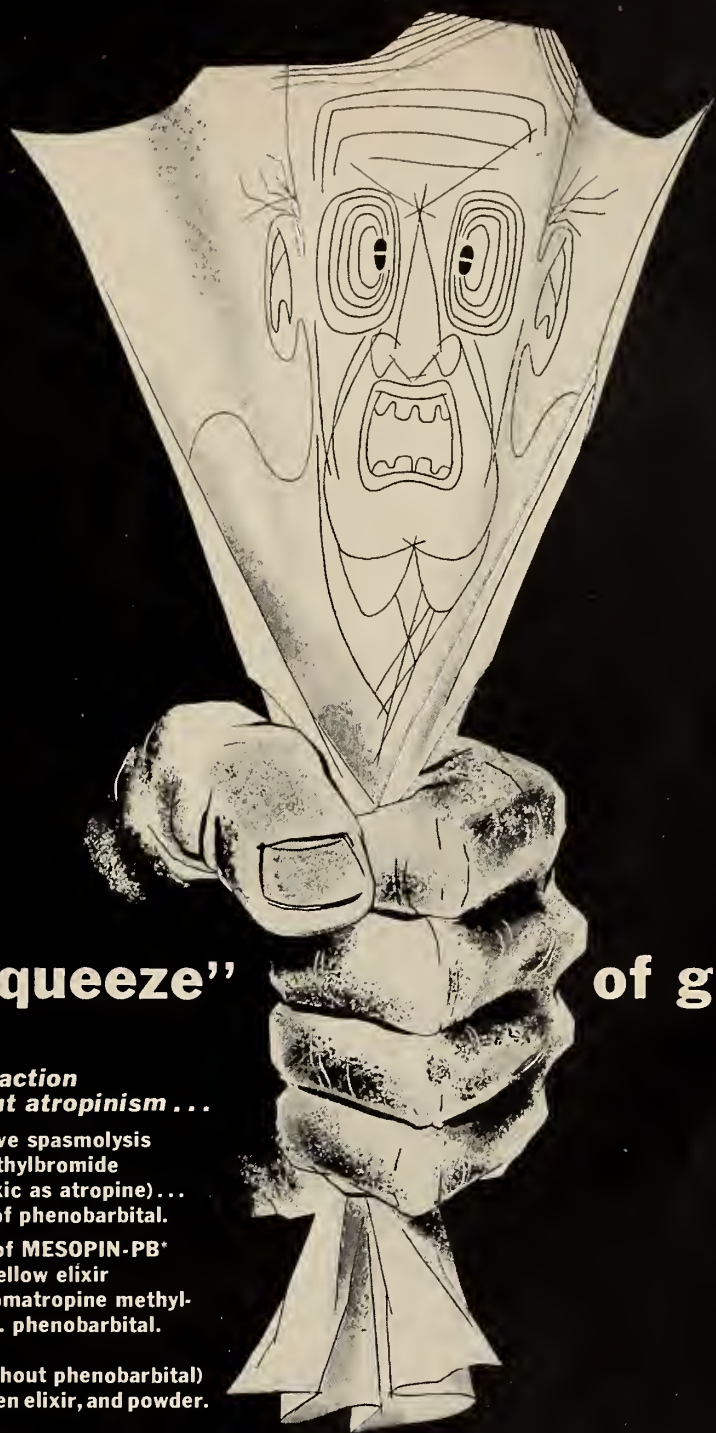
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BABIES NEED FATHERS TOO—Rhoda Kellogg. Comet Press Books, 11 West 42nd St., New York 36, 1953. 256 pages, \$3.50.

CHILDREN OF DIVORCE—J. Louis Despert, M.D. Doubleday & Company, Garden City, N.Y., 1953. 282 pages, \$3.50.

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DERMATOLOGY IN GENERAL PRACTICE—Jacob Hyams Swartz, M.D., Assistant Professor of Dermatology, Harvard Medical School, The Williams and Wilkins Company, Baltimore, 1953. 581 pages, \$11.00.

DISEASES OF CHILDREN—Garrod, Batten & Thursfield—In Two Volumes—5th Edition—Edited by Alan Moncrief, G.B.E., M.D., F.R.C.P., Nuffield Professor of Child Health, University of London; and Philip Evans, M.D., M.Sc., F.R.C.P., Physician to the Children's Department and Director of the Department of Child Health, Guy's Hospital. Edward Arnold & Co., London, 1953. Distributed by Williams and Wilkins Company, Baltimore. 1973 pages, \$21.00.

DISEASES OF THE DIGESTIVE SYSTEM—Edited by Sidney A. Portis, B.S., M.D., F.A.C.P., Associate Clinical

Professor of Medicine, University of Illinois. Third Edition, Thoroughly Revised, with 268 Engravings and 5 Color Plates, Lea & Febiger, Philadelphia, 1953. 1119 pages, \$20.

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OFFICE ORTHOPEDICS—2nd Edition—Lewis Cozen, M.D., F.A.C.S., Attending Orthopedic Staff, The Orthopedic Hospital; Assistant Professor of Orthopedic Surgery, College of Medical Evangelists, Los Angeles. Lea & Febiger, 1953. 304 pages, \$5.50.

PHYSICAL EXAMINATION OF THE SURGICAL PATIENT, THE—J. Englebert Dunphy, M.D., F.A.C.S., Associate Clinical Professor of Surgery, Harvard Medical School; and Thomas W. Botsford, M.D., F.A.C.S., Clinical Associate in Surgery, Harvard Medical School. W. B. Saunders Company, Philadelphia, 1953. 326 pages with 188 figures, \$7.50.

PHYSICIAN IN ATOMIC DEFENSE, THE—Atomic Principles, Biologic Reaction and Organization for Medical Defense. Thad P. Sears, M.D., F.A.C.P., Associate Clinical Professor of Medicine, University of Colorado School of Medicine. The Year Book Publishers, Inc., Chicago, 1953. 308 pages, \$6.00.

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TRANSACTIONS OF THE AMERICAN COLLEGE OF CARDIOLOGY—Volume II—1952—Bruno Kisch, M.D., Editor. American College of Cardiology, 140 West 57th Street, New York, N. Y., 1953. 252 pages, \$5.00.



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Long-Term Preservation of Red Blood Cells Predicted

(Continued from Page 54)

stages by decreasing concentrations of glycerin and sodium lactate. Finally the red cells are rinsed and diluted to original blood volume with a sodium chloride and lactose solution.

In the experimental work, at the end of six and one-quarter months of storage at -70 degrees C., over 90 per cent of the red blood cells were recovered intact, and approximately 64 per cent of these

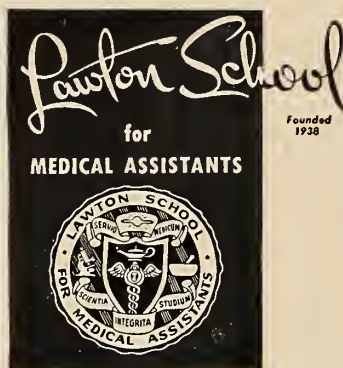
cells survived normally after transfusion into the human body.

A similar experiment was performed by the doctors with the blood being stored for 50 days at -15 degrees C. Only 79 per cent of the red blood cells were recovered intact following the higher temperature storage period, and only 47 per cent of these recovered cells survived normally after transfusion.

No immediate or delayed reactions were encountered when these stored cells were transfused into the human body, the doctors reported. It was found

(Continued on Page 61)

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Long-Term Preservation of Red Blood Cells Predicted

(Continued from Page 60)

that the cells may be satisfactorily stored in glass or metal containers.

This new procedure may be a great boon to the preservation of red blood cells in times of both peace and war, the *Archives of Surgery* editorial pointed out. Previous inability to store red blood cells has been a "definite handicap to maintaining a constant supply of blood during peacetime," and has made

the "stockpiling of red cells for the continuing demands of national defense an utter impossibility," it stated.

Although many problems still must be solved before the glycerin preservation process can be considered practical, the trend of recent studies "may be far-reaching, as they indicate that means may be at hand for preserving red blood cells for at least one to three years, and perhaps longer," the editorial said.

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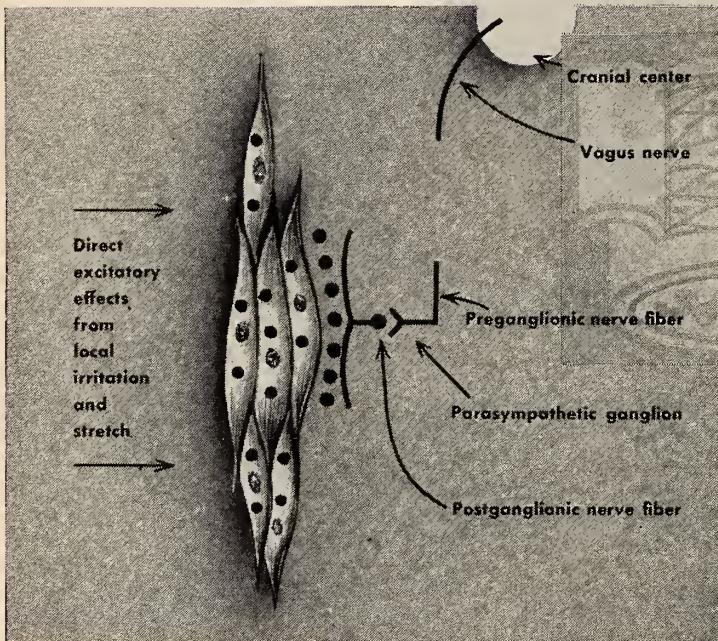
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Separation of Siamese Twins Made Possible by Medical Advances

With the separation of the Brodie Siamese twins, American medicine scored another dramatic first—one that could not have been accomplished ten years ago.

Correlated advances in medical science as a whole were greatly responsible for the successful parting of the 15-month-old Moline, Ill., boys connected at the top of their heads, C. Lincoln Williston, Chicago, wrote in a recent issue of *Today's Health*, published by the American Medical Association. Mr. Williston is manager of public relations at the University of Illinois Medical Center, where the operation took place.

Although the weaker of the twins, Roger Lee, died a month after the operation, only twice before in medical history has separation of such a type of Siamese twins been attempted. In both cases, the twins died, Mr. Williston stated.

According to the article, today the living Brodie twin, Rodney Dee, is still on the critical list and generally weak, but "his activities appear to be within normal limits, considering his somewhat debilitated condition."

"There is no evidence that his mental capacity has been adversely affected," the article continued. "He is alert, playful and responsive, and little escapes his attention. He sits up in his baby tender. And he jabbars constantly."

Participating in the operation which separated the twins on December 17, 1952, was a surgical team of 17, including four neurosurgeons, three plastic surgeons, three anesthesiologists, two pediatricians and five nurses, Mr. Williston stated. During the more than a year's time the children were under observation in the University of Illinois Research and Educational hospitals prior to the main operation, scores of highly trained personnel aided in the seemingly endless preparatory examinations and the 12 preparatory operations performed on the children. Plastic surgery has been performed on Rodney Dee five times since separation. All professional and hospital services have been rendered without cost to the family.

Highlights of the operation which separated the children were: (1) it required 12 hours and 40 minutes—perhaps the longest in medical history for children so young; (2) Roger Lee received approximately three and one-half complete changes of blood during surgery; Rodney Dee had two and one-half complete changes; (3) Roger Lee went into shock several times, and, at the moment of separation, stopped breathing; he was revived by artificial respiration; (4) it was found during the operation that the children's dura mater—a membrane covering the brain—was fused together, and that they shared

(Continued on Page 76)

Reports Sinus Disease Relatively Easy to Cure

Sinus disease is less common and easier to cure than is generally believed, according to Dr. Noah D. Fabricant, a Chicago otolaryngologist.

The sinuses, four pairs of cavities in the bones around the nose, are virtually offshoots of the nose, Dr. Fabricant wrote in a recent issue of *Today's Health* magazine, published by the American Medical Association. They are lined with the same mucous membrane as the inside of the nose, and are traversed by the air that passes through the nasal cavities. Consequently, any disease that involves the mucous membrane of the nose may affect the sinuses.

"Infection can travel with astonishing ease from the nasal cavities into them, and, since the sinuses themselves are so close together, the inflammation often spreads from one sinus to another," he said.

"Sinus disease begins during the late stages of the common cold, blending with it so insidiously that most people fail to distinguish between the original cold and the onset of sinusitis. This occurs readily, as any sinus sufferer can attest. In short, the person who says he caught cold late in the fall, and 'had one cold after another all winter' frequently had only one initial acute cold; all subsequent episodes were really manifestations of sinus infection."

There are two major forms of sinus disease—acute and chronic—Dr. Fabricant pointed out. The acute form, usually the result of a cold in the head, presents such typical symptoms as congestion of the nose accompanied by a discharge, a sense of fullness and tenderness over the cheek, a pain in the region of the upper jaw which may involve the teeth, a pain around the bridge of the nose, and/or a headache.

Some attacks of sinusitis that last for weeks and months, however, are evoked by allergy rather than infection, according to Dr. Fabricant. The symptoms of allergic sinusitis include sneezing, itching, watery nasal discharge and occasionally loss of the sense of smell. The chief offenders responsible for such conditions are pollens, vegetable powders, dusts, foods, drugs, cosmetics and bacteria.

"When an acute sinus infection is neglected, or when the infection is particularly virulent, it may be prolonged for months or years," he wrote. "Such a protracted form of chronic sinus disease is characterized by changes in the sinus membranes which are injurious and often irreparable. Interference with normal drainage of the sinuses frequently distinguishes chronic sinus infections."

"The diagnosis of chronic sinus disease should never be left to well-meaning friends. While it may seem a simple matter to make an accurate diagnosis of sinus disease, this is far from being the case."

A complete medical history, clinical examination and x-rays of the sinuses are necessary for a definite

(Continued on Page 74)

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1. Kulz, F. and Rosenmund, K.W., *Klin. Wchnschr.*, 17:344 (1938).
2. Weiss, S., *Rev. Gastroenterol.*, 12:436 (1945).
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5. Ohr, A., *Therapie d. Gegenwart*, 30:29 (1939).

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Reports Sinus Disease Relatively Easy to Cure

(Continued from Page 70)

diagnosis of sinus disease, Dr. Fabricant stated, adding:

"Sinus disease is not as difficult to cure as many people have been led to believe. Treatment is likely to be more successful when the diagnosis is definite and the cause known."

Acute sinus infections are overcome by means of antibiotic or sulfonamide therapy, Dr. Fabricant said. Bed rest, the application of heat, and the proper use of nasal medicaments to enable the patient to breathe freely and to establish sinus drainage are of

value; headaches can be mitigated or abolished by a mild, pain-relieving drug. Irrigation of the sinuses or surgical drainage may be necessary.

Treatment of allergic sinusitis is simplified if the offending agent is discovered and controlled, he pointed out. In chronic sinus infections, various measures, including nose drops, gentle suction, heat, irrigation, and the administration of some of the newer antibiotics, will give relief and even offer a cure. Some chronic sinus conditions, however, may require surgery to correct them.

"Although sinusitis still presents some unsolved medical aspects, the prospect for overcoming sinus disease is full of promise," Dr. Fabricant concluded.

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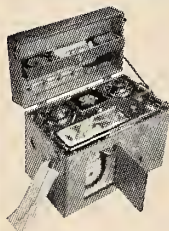
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Separation of Siamese Twins Made Possible by Medical Advances

(Continued from Page 70)

one superior sagittal sinus—the blood vessel which serves as the main route of blood flow from the brain back to the heart.

Rodney Dee was given the sagittal sinus as the majority of it had been endowed to him by nature, and he also was given all of the dura mater. Because of the lack of the sagittal sinus, Roger Lee went into a deep coma following the operation, and died a month later. The major cause of his death is believed to have been pressure on the vital centers in the base of the brain, the article said.

"Rodney Dee still faces a long, uphill struggle," Mr. Williston pointed out. "Attending physicians still refuse to speculate on how much longer he must remain in the hospital. His program of rehabilitation will require several months. Some type of supporting structure eventually must be placed between the dura mater and the large flap of scalp that covers his brain. It must be a bone graft or perhaps a plastic or metal substance. This structure will give the brain the mechanical protection it needs.

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